FACTORS THAT EXPLAIN FACULTY VOTING IN HIGHER EDUCATION UNION REPRESENTATION ELECTIONS

BY

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A DISSERTATION PRESENTED TO THE GRADUATE SCHOOL
OF THE UNIVERSITY OF FLORIDA IN
PARTIAL FULFILLMENT OF THE REQUIREMENTS
FOR THE DEGREE OF DOCTOR OF PHILOSOPHY

UNIVERSITY OF FLORIDA

1986

ACKNOWLEDGEMENTS

I would like to express my sincere appreciation to Dr. Chester A. Schriesheim, my dissertation committee chairman, for his unfailing patience, support, guidance, and enthusiasm throughout this project. I also wish to thank the other members of my committee, Dr. William M. Fox, Dr. Luis R. Gomez-Mejia, and Robert B. Moberly, J.D. for their generosity with their time, patience, and insight.

Completion of this project would have been very difficult without the continued belief in human endurance expressed by my sister and her husband, Marsla and Jorge. I owe special gratitude to my daughter Samantha, who never failed to give me her total support, encouragement, and love.

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Abstract of Dissertation Presented to the Graduate School
of the University of Florida in Partial Fulfillment of the
Requirements for the Degree of Doctor of Philosophy

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May, 1986

Chairman: Chester A. Schriesheim
Major Department: Management and Administrative Sciences

The present study attempted to predict and explain faculty voting in union representation elections. The process of faculty unionization was examined with a literature-based, integrative unionization process model composed of attitudinal and behavioral variables. Utilizing both exploratory and hypothesis-testing longitudinal field study approaches, questionnaires were distributed both before and after a union representation election to all 225 higher education public sector faculty members who were eligible to vote. The questionnaires examine personal characteristics, work context attitudes, attitude toward unions, union instrumentality perceptions, intended voting behavior, and actual voting behavior.

Nine relationships were hypothesized and examined with correlation analysis, simultaneous and stepwise regression analysis, and discriminant analysis. Results indicated that signing a union authorization card and psychological job-related stress have a positive correlation with attitude toward unions, union instrumentality, voting intention, and voting behavior. Trust in the employing organization's administration, economic and noneconomic job satisfaction, and organizational commitment have a negative correlation with attitude toward unions, union instrumentality, voting intention, and voting behavior. Also, attitude toward unions, union instrumentality, voting intention, and voting behavior are each positively correlated with the other. In addition, union instrumentality was most strongly predicted by attitude toward unions, attitude toward unions was most strongly predicted by union instrumentality and signing a union authorization card, voting intention was most strongly predicted by union instrumentality and signing a union authorization card, and voting behavior was most strongly predicted by voting intention. Finally, the discriminant analysis resulted in two models; one correctly classified more than 96 percent of the voting intention group membership and the other correctly classified more than 81 percent of the voting behavior group membership.

The proposed unionization process model, as well as rival causal models, were tested using path analysis. Results indicated that signing a union authorization card and noneconomic job satisfaction each lead to attitude toward unions, that attitude toward unions is causally prior to union instrumentality, and that union instrumentality leads to vote intent, which in turn leads to voting behavior. Finally, a more comprehensive longitudinal model of the union representation process was proposed to guide future empirical investigations.

CHAPTER I

INTRODUCTION

Study Overview

The present study is exploratory in nature, and attempts to predict and explain faculty voting in union representation elections. The process of faculty unionization is examined herein with a literature-based, integrative unionization process model composed of attitudinal and behavioral variables. The proposed model suggests that individuals' perceptions of their work context, their attitude toward unions, and their personal characteristics separately and jointly lead to a perception of a union's instrumentality, which in turn leads to intended voting behavior, then actual voting behavior, and finally to actual election results.

The present research thus attempts to explain factors associated with higher education faculty voting behavior in union representation elections. Questionnaires were distributed to higher education public sector faculty both before and after a union representation election. Multiple statistical techniques were used to test both the causal ordering of the proposed model, and to assess the model's predictive ability. The results of this investigation and tentative conclusions are discussed, as well as suggestions for future research. The relevant empirical literature and the proposed unionization process model are covered in Chapter II in detail. Chapter III details the hypotheses tested, the research design employed, the sample and data collection procedure used, the attitudinal and behavioral measures used, and the statistical methods employed. Chapter IV presents the results obtained, and finally, Chapter V discusses conclusions based upon the present investigation and makes suggestions for future research.

Chapter Overview

As mentioned above, the present research examines public sector higher education faculty. Both public sector unionization and public sector higher education faculty unionism have been on the rise during the last two decades. The extent of these two unionization growth areas and possible reasons for their expansion are explored below. Also, faculty concerns, such as dissatisfaction with compensation systems, are examined as contributors to the expansion of higher education faculty unionization. Higher education administrators' concerns and pertinent legislative constraints are also discussed as possible impediments to the future growth of public sector higher education unionization.

Chapter I also describes the American industrial relations system and details private sector and public sector union representation and election procedures. The examination of these procedures demonstrates substantial similarities between the private and public sectors. That is, public sector employee legislation, administrative agency jurisdiction, and union representation and election procedures have been modeled after private sector provisions. Consequently, as discussed at the end of this chapter, the present study makes few private-public sector distinctions since the unionization process is similar.

Public Sector Unionization

Unionization is the process of a collective banding together of common interest employees for the purpose of negotiating with their employer, through a representative of their choosing, wages, hours, and terms and conditions of employment. The process of unionization has both a legal component (i.e., executive orders and statutes) and an individual component (i.e., attitudes and behaviors). Together these factors have created the American industrial relations system in both the private sector and the public sector.

As mentioned earlier, public sector unionization has been on the rise since 1959, when Wisconsin became the first state to enact a public sector labor relations statute. This state statute was followed by the frist federal enablement in 1962 (Executive Order 10988). This order, though limited, granted federal employees the right to join (or not join) labor organizations without fear of reprisal. However, it was not until 1970 when President Nixon signed Executive Order 11491 that the federal employee framework began to approach the private sector model of exclusive representation.

Although private sector employees have been covered since 1935 by the National Labor Relations Act, and federal employees have been covered since 1978 by the Civil Service Reform Act, no similar comprehensive federal legislation has been extended to public sector state, municipal, or local employees. The burden is placed on each individual state to enact legislation granting public employees the right to self organize, to form, to join, or assist labor organizations, or to bargain collectively through representatives of their own choosing with respect to wages, hours, and terms and conditions of employment.

The rate of growth of public sector unionism has far outdistanced that of the private sector. As of 1979, approximately one of every two public employees was a member of a collective bargaining unit, as compared to one in four in the private sector (Grodin, Wollett, & Alleyne, 1979). And, according to the best information available at this time, by 1982, 27 percent of those public and private sector employees eligible for union representation were organized (Bureau of National Affairs, 1985). Also, by this time, 37 states and the District of Columbia had some form of public sector enabling legislation. Most of these statutes follow the private sector model of exclusive representation and the mandatory duty to bargain collectively (Grodin et al., 1979).

It has been proposed that a number of national and state environmental factors led to the rapid development of public sector unionism (Lawler, 1982a; Lewin, 1985; Hunt, White, & Moore, 1985; Najita, 1982; Weber, 1979). First, during the 1960s there was a rapid expansion of public services. Thus, the public employee work force grew to meet this increase in public service demand. Second, momentum was gained by the civil rights drive which was a national political and ideological movement that promoted individual civil liberty protection; this protection was also demanded by the public sector employee. Third, the 1960s was a time of national economic abundance, the post Second World War baby boom effects of increased work force participation, and the explosion of enrollment in schools, colleges, and universities. Public sector unions were seen by employees as the vehicle for them to partake in a wide range of governmental decisions, including wages, hours, and working conditions. Fourth, unlike the private sector, the public sector had a well-developed, explicit personnel system--the civil service board. Consequently, many of the public employee demands, such as seniority systems, job security, and retirement plans, were already in place and public unionism and collective bargaining needed only to be superimposed. Fifth, since federal employees were prohibited from striking, as were other public employees where statutes applied, public sector managers and administrators were afforded a legislative refuge from responding to employee demands. However, public employees did strike, and the strike became a mechanism of political force as well as economic pressure. In order to exert political pressure, public employee interest lobbying became the vehicle for promoting public employee demands. Since private sector labor lobbying mechanisms were already in place, it was quite simple for these unions to begin representing public employees. Many public employees were also already members of various professional associations (e.g., National Education Association; American Association of University Professors) and it was natural for these associations to begin to represent their members' interests at the bargaining table. Finally, there existed a large fragmented legal structure since there was no comprehensive federal framework. Thus, each separate governmental unit had an incentive to lobby for legislation they felt best protected their interests. This resulted in public sector unions concentrating their efforts on the particular employee groups that they represented and helped to bring about separate state and federal statutes that protected and promoted these employee interests. A proliferation of state statutes and federal executive orders resulted, which further assisted in the spread of public sector unionization.

Growth of Higher Education Unionism

Higher education faculty unionization has been in a period of growth, as has public sector unionism, since the first faculty union was formed at the City University of New York in 1966. Private sector faculty unionism gained extra momentum in 1970, when the National Labor Relations Board (NLRB) reversed its twenty-year "no-coverage" policy. In a labor dispute between Cornell University and the Association of Cornell Employees [183 NLRB No. 41, 74 LRRM 1269 (1970)], the NLRB decided to assume jurisdiction over labor disputes of privately-funded nonprofit universities and colleges. Although the NLRB decision had no direct relevance to the public sector, unions seeking to represent both private and public sector faculty began organizational drives and representation elections in both sectors. It appears that these unions reasoned that if private sector faculty were afforded collective bargaining rights and sought to exercise these rights, so should their public sector counterparts. Consequently, this NLRB decision led to a spurt of higher education faculty unionization in both sectors (Garbarino, 1975, 1976, 1980; Garbarino & Lawler, 1977, 1978, 1979; Grodin et al., 1979).

By the end of 1984, 24 percent of public and private sector faculty in four-year institutions were organized (118,707 of 498,000), and 36 percent of public and private two-year community college faculty had collective bargaining agents (72,909 of 202,000); overall, 27.3 percent of the nation's higher education faculty were covered by a collective bargaining agreement, although more public sector faculty (36 percent) were represented by unions than were private sector faculty (4.8 percent) (Douglas & Kotch, 1985; "Unionization among", 1985). Correspondingly, at the institutional level, 25 percent of the 3,284 public and private colleges and universities in the United States were organized. Approximately one-third of all organized institutions and one-half of all faculty were organized from 1969 to 1971, while most election activity occurred in the mid 1970s, with the peak occurring in 1975 (Aussieker & Garbarino, 1973; Begin, Settle, & Alexander, 1977; Bogananno & Suntrup, 1975; Garbarino, 1980; Lawler, 1982a).

In addition to the national and state environmental factors (mentioned above) that led to the expansion of public sector unionism, Odewahn and Spritzer (1976) and others (Baker, 1984a, Hunt et al., 1985; Ladd & Lipset, 1973; Lawler, 1982a) have suggested a number of other reasons for the rapid growth in faculty unionization. Included within these are (1) faculty dissatisfaction with compensation and governance systems; (2) threatened balance in institutional decision making power between faculty senates and campus administrators; (3) depersonalization and bureaucratization of campus life; (4) loss of collegiality between faculty and administrators; (5) faculty desire to protect themselves from anticipated effects of declining demand for faculty (due to a decreasing student enrollment);

and (6) to offset expected legislative restraints brought on by a general public disenchantment with higher education. Each of these factors, identified as faculty concerns, administrators' concerns, and legislative constraints, are further discussed below.

Faculty Concerns

During the period of rapid higher education faculty unionization, the nation was experiencing one of its worst periods of inflation in modern times. Due to legislative budgetary cut-backs, public sector faculty real compensation was declining. Private sector faculty were also experiencing declining real income since student enrollments were down, causing less money to be available for faculty pay increases. This culminated in faculty dissatisfaction with pay and fringe benefits, which, of course, are traditional private sector employee grievances which help spur unionization efforts (Bognanno, Estenson, & Sundrup, 1978; Garbarino, 1980; Ponak & Thompson, 1979).

In addition to compensation dissatisfactions, faculty were becoming disenchanted with the bureaucratization of campus life (Baker, 1984a, 1984b; Lawler, 1982a). Unlike the 1930s, 40s, and 50s, colleges and universities had become depersonalized due to their vast sizes. Additionally, federal and state reporting requirements increased (e.g., Equal Employment Opportunity forms; Federal Office of Contract Compliance forms), requiring campus administrators to surrender most of their nonadministrative research pursuits, leading to a loss of collegiality between faculty and administrators (Garbarino, 1980; Lawler, 1982a).

This bureaucratization also created a decline in faculty decision making power, which heightened faculty professionalism concerns. Faculty senates, long the faculty voices on professional and policy issues, were loosing their effectiveness in the face of competing interest groups (Lawler, 1982a). Faculty concerns and grievances were going unanswered as campus administrators struggled with monetary cut-backs and declining student enrollments.

Finally, faculty were becoming concerned over their job security. With national, state, and local monetary freezes and cut-backs, many faculty positions, when vacated, were being eliminated. Declining student enrollment exacerbated the situation. Moreover, faculty feared increased legislative restraints, which could threaten job security, due to a general public disenchantment with higher education and its faculty (Lawler, 1982a).

These faculty concerns continued to grow as the 1970s progressed. Many faculty had been long-standing members of various professional associations, such as the National Education Association and the American Association of University Professors, and turned to these organizations with their anxieties. Although these associations did not refer to themselves as union until the mid-1970s, they began to bargain collectively for their members. Further, the

American Federation of Teachers, a national teachers union affiliated with the AFL-CIO, began to represent higher education faculty at the bargaining table.

Administrators' Concerns

With the spread of higher education faculty unionism, campus administrators became concerned about its possible effects. A number of recent studies about administrator attitudes toward faculty collective bargaining have concluded that the majority of campus administrators feel collective bargaining should have no role in higher education (Gerhart & Maxey, 1978; Kennelly & Peterson, 1974; Odewahn & Spritzer, 1976; Wilson, Holly, & Martin, 1983).

It appears that campus administrators see no significant increase in faculty influence on institutional policy making due to union representation, nor do administrators believe that faculty should have increased influence since they are unable to assess the institutions' overall needs (Wilson et al., 1983). Moreover, campus administrators view unions as ineffective in helping faculty since unions are seen as having not significantly increased faculty job security, academic freedom, or general salaries. Overall, college and university administrators believe that unions have a divisive effect on academic life and lead to mediocre faculty performance (Odewahn & Spritzer, 1976; Wilson et al., 1983). It seems that the majority of campus administrators would agree with Cameron's findings (1982) that organized institutions are less effective than are unorganized institutions in the degree to which students and faculty develop academically and professionally and in the degree to which the institution is able to provide opportunities for development in these areas.

Finally, administrators do not view their need to consult with a union in a favorable way. Administrators already must confer with an extended bureaucratic hierarchy and feel that a union only increases costs and delays and adds to the restriction of their administrative prerogatives.

Legislative Constraints

During the past few years, except for 1982, there has been a declining rate of public sector faculty unionization. With this slowdown, faculty unions have been concentrating their efforts in the private sector. However, private sector prospects appear bleak since the Supreme Court upheld the *Yeshiva* decision in February, 1980.

Yeshiva University is a private institution in New York City. In 1974 the faculty association petitioned for a representation election under the National Labor Relations Act. The university administration objected to the petition by reasoning that the faculty were not covered by the Act since they were managerial and supervisory personnel. The NLRB reasoned that the faculty were covered and ordered the election.

The union won the election and filed a refusal to bargain charge with the NLRB. The NLRB ruled against the university and ordered them to bargain. The university filed an appeal to the Court of Appeals, Second Circuit, however, the Court of Appeals overruled the NLRB decision. The Supreme Court then upheld this decision in a 5-4 vote (48 U.S.L.W. 4175).

What the Yeshiva decision will mean to the future of private sector faculty unionization will only be known in time. It appears that the Yeshiva faculty are unusual in the amount of autonomy and influence they have over university affairs. What the decision means is that private sector faculty and their organizations are not necessarily protected by the National Labor Relations Act. Although the decision does not prevent faculty unions from being recognized voluntarily or from negotiating agreements, it could result in a substantial reduction of private sector organization.

The reduction of faculty union growth due to the Yeshiva decision appears to have had little spill-over effect to the public sector. In 1982 the California State University system was organized, which represents a nearly 20,000 member multi-campus bargaining unit. Also, during 1984 four new collective agreements were signed and the number of faculty union representatives increased 2.8 percent ("Unionization among," 1985). Although few unorganized institutions remain in states with supportive legislation, there still are many faculty who are unrepresented (approximately 324,000 of 506,000).

The large fragmented legal structure of public sector labor relations appears to be an impediment to rapid future growth. Without a uniform, comprehensive Act as a guideline, each state labor dispute must be tried on a case-by-case basis in the respective state courts; there are no carry-over effects of these decisions to other state jurisdictions. Additionally, due to this fragmentation neither faculty nor administrators are aware of their respective legal rights with any surety.

A further public sector legislative constraint is the separation of funding and administrative powers. Even though campus administrators (e.g., a board of regents) may negotiate a monetary increase with faculty representatives, there is no certainty that state legislators will approve the budgetary increase. Since state legislators depend on public approval to stay in office, they listen to competing interest groups. Thus, since higher education faculty typically constitute a small percentage of the voting public, their interests often are foregone for larger (more powerful) constituents.

The constitutionality of delegating decision making authority to nonelected individuals (e.g., state collective bargaining representatives) also poses an additional problem (Lawler, 1982a). Basic questions involve the identify of the public "employer" and whether this employer has the authority to enter into a binding contract (Beal, Wickersham, & Kienast, 1976; Groden et al., 1979). Is the employer the state governor; the executive branch who has the overall responsibility for the state bureaucracy; the legislative branch who appropriates the money and approves the financial terms of contracts; the operational heads of state agencies and institutions who are most familiar with their individual needs; the public at large who must ultimately fund any budgetary increase? Without a statute clearly identifying the public employer, the question of decision making authority must be answered on a case-by-case basis (Groden et al., 1979).

A final legislative constraint on faculty unionization is that faculty collective bargaining is often viewed as shifting traditional collegial governance structures. Faculty senates are the conventionally recognized mechanism used to express faculty sentiments (e.g., promotion and tenure requirements; instructional policies) to institutional administrators and state legislators. However, with the advent of faculty unionism, organized faculty have turned to their union representatives to represent and express faculty interests. This shift from a faculty senate orientation to one of organized labor has caused legislator resistance since many state officials believe faculty interests are best championed by faculty members themselves and not by organized labor (Beal et al., 1976; Groden et al., 1979). The effect of this change in collegial governance structures on institutional governance has recently been examined. Adler (1977), in a follow-up to the 1970 American Association of University Professors survey of 1000 institutions, concluded that average levels of faculty participation in governance decision making increased over the seven-year period. However, Adler (1977) found no evidence to suggest that faculty bargaining status contributed to this increase. Contradictory results were reported by Lee (1979), who suggested that bargaining status did contribute to increased faculty participation in university governance decision making. But, the nature and direction of the shift appears to depend upon preunionization conditions. These mixed results thus preclude drawing any firm conclusions about the effect of faculty bargaining status on institutional governance.

Summary

Public sector unionization has spread in the last two decades and this can be attributed to many state and national environmental factors. Among these factors are the expansion of public services, a national movement that promoted individual civil liberty protection, increased enrollment in public educational institutions, the presence of a civil service board that was adaptable to public unionism needs, effective interest group lobbying, professional associations beginning to represent their members' interests in collective negotiations, and a proliferation of enabling legislation. Higher education faculty unionization has also spread during this period, and in addition to the above national and state environmental reasons, higher education unionism has grown because of faculty dissatisfactions. Such dissatisfactions include those with compensation and governance systems, decision making powers, depersonalization and bureaucration of campus life, loss of collegiality between faculty and administrators, job security, and anticipated legislative restraints. As discussed below, these expansions in employee unionization have occurred within the established private sector industrial relations legal system, and helped create the public sector industrial relations legal system.

American Industrial Relations System

Overview

The National Labor Relations Act (NLRA or the "Act") is a comprehensive federal law designed to regulate labor-management relations in the private sector. The basic principle of the NLRA is found in section 7, granting employees the right to form labor organizations, to deal collectively through such organizations regarding wages, hours, and terms and conditions of employment, and to engage in concerted activities in support of these rights. Congressional intent was to create conditions of self-regulation, industrial peace, and to encourage the formation of labor unions as an effective voice for the individual worker (Gorman, 1976).

The National Labor Relations Board (NLRB or the "Board") is the administrative agency that was created by the Act to implement both unfair labor practice provisions (section 8) and election or representation provisions (section 9). Board members have authoritative voice in representation cases with respect to the size of the election unit (i.e., the appropriate bargaining unit), and the validity of the election. On a day-to-day basis, however, the tasks of investigating and supervising elections are delegated to regional offices in major cities throughout the United States.

The NLRA excludes from the definition of employer the "United States or any wholly owned Government corporation . . . or any State or political subdivision . . ." [Section 2(2), 29 U.S.C. Section 152 (2)]. In two separate 1967 decisions, the United States Supreme Court rejected the distinction in constitutional status between public and private sector employees [Keyishian v. Board of Regents, 385 U.S. 589 (1967); Garrity v. New Jersey, 385 U.S. 493, 500 (1967)], which have since been interpreted as granting public sector employees the right to organize and the right to join a labor organization. The Court ruled that public employees cannot be "regulated to a watered-down version of constitutional rights" [Garrity v. New Jersey, 385 U.S. 493, 500 (1967)]. The Court reasoned that since private sector employees had a constitutional right to self-organization, to belong to labor organizations, to engage in concerted activities, and, through these activities and organizations, the right to seek improvement in the terms and conditions of their employment, so did public sector employees (Groden et al., 1979). Thus, these decisions led to a proliferation of union organizing activities (as discussed above) which resulted in increased public sector unionization. Although a number of bills have been presented before Congress, no comprehensive federal legislation has been passed to regulate labor-management relations in the public sector.

In keeping with the private sector model of exclusive representation and mandatory collective bargaining, most state governments (37 states and the District of Columbia) have created similar public sector legislation. And, using the NLRA as a guide, these states have established an administrative agency to oversee state labor relations. These agencies are typically called Public Employee Relations Boards or Commissions (PERB or PERC) and perform duties similar to the NLRB regional offices.

The Private Sector

There are 31 regional offices of the NLRB and each is headed by a regional director and is staffed by a regional attorney and a number of trial attorneys, field examiners, and clerical employees. Most of the business of the NLRB is performed at this level without any formal participation by the five Board members in Washington.

Regional offices process all representation cases. Election petitions are filed with the regional office and are then investigated by a field examiner to determine the petition's appropriateness. If a representation hearing is held it is conducted by a regional hearing officer and it is the regional director who makes the decisions on such matters as the Board's jurisdiction, the appropriate bargaining unit, voter eligibility, and objections as to the validity of the election. The regional director's decisions, both prior to and after the election, are subject to review by the NLRB.

Twenty-three days is the average time elapsed between filing an election petition and the close of the representation hearing in the regional office, with 22 more days until the issuance of the regional director's decision or order (Gorman, 1976). Elections are usually held one month from the date of the election order, unless circumstances, such as large work force vacation periods, dictate otherwise.

Representation case procedures. In order that collective bargaining may proceed, a determination must be made of the appropriate bargaining unit, as well as the representative who will speak on the unit's behalf. All board decisions are binding upon both the bargaining unit members and their representative. In some cases the employer may voluntarily acknowledge the existence of a bargaining unit and voluntarily recognize a union as the representative of its employees. However, in most cases the union seeking representation is not recognized by the employer, and statutory procedures have been provided for Board determination of the appropriate bargaining unit and their representative.

When an election petition is filed by a union, the Board requires proof in the form of a showing of interest. An acceptable showing of interest can only be demonstrated by at least 30 percent of the employees in the unit requested by the petitioner; this is usually evidenced by signed authorization cards designating the petitioner as their desired bargaining representative. It is not sufficient that the cards merely request that an election be held (Cox, Bok, & Gorman, 1977; Gorman, 1976).

The regional office investigates the petition to determine whether the Board has jurisdiction, whether there is really a question of representation, and whether the filing of the petition has been "timely." A timely petition is one that meets three conditions: (1) a substantial number of employees are seeking representation; (2) no valid election has occurred within the last 12 months; and (3) there is no valid collective bargaining agreement in force (Gorman, 1976). An attempt is made to encourage the parties to enter a consent election agreement. This is when the details of the election, such as date, location, and voter eligibility, can be agreed upon. Failing a consent election, a formal hearing is held to determine the election particulars, and assuming all is proper, an election order is issued. As mentioned above, the election date is usually scheduled for no more than one month after the order date. This permits the union and the organization to communicate with the voters, as well as allowing the Board to review any pre-election decisions.

The election is conducted under the supervision of the overseeing agency, typically on the employing organization's premises. Each voter is given a secret ballot on which he/she may designate his/her choice. If there are no meritorious election challenges (challenges that would invalidate the election results, such as a question of voter eligibility or a violation of Board rules), the results of the election are certified, with the option which receives the majority of the votes cast the winner.

A Globe election. A Globe election stems from the Globe Machine Stamping Company case in which the NLRB permitted a group of craft employees (i.e., skilled employees) to express a preference for representation in an independent bargaining unit [3 N.L.R.B. 294 (1937)]. An election of this form usually is a two-union election where the employees in the prospective smaller unit can choose between the union seeking to represent that unit (e.g., law school faculty) and the union seeking to represent the more comprehensive unit (e.g., an institutions' faculty). These elections are typically used when two unions are vying for the same group of employees, and also when there is only one union seeking representation rights but the overseeing agency concludes that either of two units would be appropriate.

If the smaller unit representative receives a majority of the votes cast by the prospective members, that union is certified as the representative. The remaining votes are tallied separately, to determine whether the comprehensive unit representative has been selected by a majority. However, if the employees in the smaller unit do not vote for separate representation, all the employee votes are pooled and the comprehensive unit representative is certified if selected by a majority of the pooled votes.

Insulation from an election. Congress included an election-bar rule in section 9 (c) (3) of the Act: "no election shall be directed in any bargaining unit or any subdivisions within which, in the preceding twelve-month period, a valid election shall have been held." This bar originally applied only in the event the first election resulted in the certification of a union. The bar now extends to elections in which the union is defeated.

A longer period of insulation from an election is afforded by the contract-bar rule. Here the Board will dismiss an election petition which is filed during the term of a collective bargaining agreement. In order for this bar to be enforced, the collective agreement must have a definite termination date, and may only apply for a three-year duration. In effect, this bar only prevents a representation election from occurring for a maximum of three years. Consequently, most collective agreements are rarely written for a longer period.

The Public Sector

As mentioned previously, the public sector counterpart to the NLRB is a state mandated public employee relations administrative agency (PERB or PERC). These state agencies process all unfair labor practice cases and all representation cases. Election petitions are typically filed with the state PERB and then investigated by a field examiner to determine the petition's appropriateness. If a representation hearing is required, it is conducted to determine the PERB's jurisdiction, the appropriate bargaining unit, voter eligibility, and objections as to the validity of the election. All hearing decisions are subsequently reviewed by the overseeing agency's director and, if approved, an election order is issued. The normal elapsed time between an election order and an election is one month.

Representation case procedures. When an election petition is filed by a union, most state administrative agencies require that at least 30 percent of the employees in the prospective bargaining unit sign authorization cards designating the petitioner as their desired bargaining representative. As in the private sector, most PERBs have ruled that a mere request that an election be held is not sufficient (Grodin et al., 1979).

An election petition investigation is normally conducted to determine whether the PERB has jurisdiction, whether there is really a question of representation, and whether (as in the private sector case) the petition is timely. An attempt is usually made to have the parties agree upon the election particulars (i.e., a consent election), but baring such agreement, a formal hearing is held.

In most states (including Florida) a union may obtain recognition either on the basis of a secret ballot election to determine majority status or on the basis of voluntary recognition (as in the private sector model). However, some variations among the states exist with respect to the type of evidence upon which an employer may rely other than an election. For example, the Civil Service Reform Act (section 7111) and a few states (e.g., Alaska Statute §23.40.100) make an election the only route to recognition.

Where recognition is based upon an election, the procedure is typically very similar to that under the NLRA. However, some variations do exist. The California statute referring to local government employees is not administered by any overseeing agency. All rules governing elections are left up to the government employees themselves (Government Code §3500).

In Vermont a union must receive the majority of the votes within the bargaining unit, rather than a majority of the votes cast (Vermont Statute §1583). Whereas, in Oregon college and university professors vote separately for or against representation, and then for the particular labor organization, if any, they wish to represent them. Here, if a majority votes against representation, the ballots for particular labor organizations are not counted.

Special provisions. Public sector statutes have typically embraced Globe election provisions (Grodin et al., 1979). Here, again, members of a homogenous occupational group may elect for separate representation, as opposed to inclusion in a larger, more comprehensive, bargaining unit. Analogous to the private sector distinction of skilled versus unskilled and semi-skilled worker status, community of interest (i.e., similarity of jobs) is more frequently used in the public sector. Although the concept of a community of interest has been viewed as a vague, multifaceted criterion, the NLRB has outlined 11 interest factors they consider and many public statutes have incorporated these guidelines (Cox et al., 1977; Gorman, 1976; Grodin et al., 1979): (1) similarity in the scale and manner of determining earnings; (2) similarity in employment benefits, hours of work, and other terms and conditions of employment; (3) similarity in the kind of work performed; (4) similarity in qualifications, skills, and training of the employees; (5) frequency of contact or interchange among the employees; (6) geographic proximity; (7) continuity or integration of production processes; (8) common supervision and determination of labor relations policy; (9) history of collective bargaining, (10) desires of the affected employees; and (11) extent of union organization. Similarly, public sector bargaining unit determination is typically based on (1) the scale and manner of determining earnings; (2) the qualifications, skills, and training of the employees; (3) geographic proximity; and (4) the avoidance of unit fragmentation (Grodin et al., 1979). The primary intent of many public sector bargaining unit determination policies is to provide for the continued "efficient administration of government" [Florida Statute §447.307(4)(a)] and to control the "number of employee organizations with which the employer might have to negotiate" [Florida Statute §447.307(4)(b)]. It is not uncommon to find university and college faculty divided into four separate bargaining units: medical, agricultural and engineering, law, and the balance of the institution's faculty.

Election-bar rules and contract-bar rules are also prevalent in public sector statutes (Grodin et al., 1979). As in the private sector, public sector election bars prevent a representation election from occurring if a valid election has been held during the previous twelve months. And, contract bars typically prevent a representation election for up to three years if a valid collective bargaining agreement is in force.

Summary

The growth of higher education faculty unionism can be attributed to the expansion of public sector unionization, the extension of the NLRB's jurisdiction, and the faculty concerns outlined above. Although private and public sector labor-management relations laws differ in many respects (e.g., labor's use of strikes), they are very similar with respect to administrative agency jurisdiction, representation case procedures, Globe elections, and election insulation provisions. Consequently, since the present study examines factors that explain higher education faculty voting in union representation elections, which is one phase of the representation process, few distinctions will be made between the two sectors.

As mentioned previously, the present research uses a sample of public sector professionals. However, the literature review of the unionization process literature contained in Chapter II includes studies of union representation voting in both the private and public sectors, and studies of white and blue collar professionals and nonprofessionals as well. It appears that in initial union representation elections and in initial collective bargaining negotiations there are no noteworthy differences among the four populations; blue collar and white collar nonprofessionals and professionals in both the public and private sector are primarily concerned with the economic aspects of employment (Klaus, 1969; Kleingartner, 1973; Kochan, 1979; Ponak, 1981).

Noneconomic factors become important to some of the groups only when economic concerns are satisfied, which is after the initial stages of union organizing and contract bargaining have passed (Dayal, 1982; Hammer & Berman, 1981; Klaus, 1969; Kliengartner, 1973; Kochan, 1979; Ponak, 1981; Ponak & Janz, 1984).

CHAPTER II

REVIEW OF THE LITERATURE

Introduction

Since the focus of this research is on higher education faculty voting in union representation elections and, as explained earlier, most election activity occurred in the mid 1970s, the primary focus of the review which follows is on studies which have been published since 1972 and which deal with attitudes, perceptions, and behaviors associated with prounion sentiments. 1972 is the starting point of this review because this began a period of rapid change in work place contextural factors and changing union organizing emphasis, as well as a time of growing interest in the unionization process by behavioral scientists (Lewin & Feuille, 1983; Strauss & Feuille, 1978). The change in work place contextural factors came about with the passage of the Equal Employment Opportunity Act of 1972 (EEOA), which required that employers prevent employment discrimination in the workplace or take remedial action to offset past employment discrimination. Also, the Equal Employment Opportunity Commission (EEOC; the Act's administrative agency) was given the authority to bring lawsuits against employers to enforce compliance with the Act. Thus, the EEOA dramatically transformed the relationship between employers and employees by prohibiting many past employer practices, and by remedying current employment discrimination situations. Similar worker protection legislation has also been established at the state level (Ledvinka, 1982).

Union organizing focus also changed in the 1970s (Fossum, 1979). Where traditionally unions focused on private sector production workers and sought to restrict employer actions with respect to discriminatory and arbitrary practices, unions turned their attention to the private sector professional and to public sector employees in general (Beal et al., 1976; Fossum, 1979). This shift in union emphasis occurred for many reasons and can be summarized as follows. The proliferation of employee protection legislation dispelled the need for unions to attempt to restrict many employer past practices since such practices were now regulated by law. The passage of public sector employee enabling legislation gave unions the opportunity to organize a vast unrepresented work force. And, our national shift from a production economy to a service economy (especially government services) reduced the private sector work force and expanded the public sector work force, many of whom were sympathetic to the union movement due to their private sector experiences. Consequently, unions sought to organize public sector workers, and although still concerned with traditional "bread-and-butter" issues (wages and fringe benefits), union appeals were tailored to public sector needs such as expanded enabling legislation, professionalism issues of job autonomy and decision making participation, and the establishment of grievance mechanisms (Grodin et al., 1979).

Behavioral scientists developed increased interest in the unionization process during the 1970s mainly because of the emergence of large-scale unionism among public sector employees and professional workers (Strauss & Feuille, 1978). Unlike the research of the 40s, 50s, and 60s which was mainly descriptive, the unionization research which emerged made greater use of quantitative data and more rigorous methodology, and much was interdisciplinary (e.g., involving psychologists, sociologists, economists, and political scientists jointly) (Lewin & Feuille, 1983; Strauss & Feuille, 1978). Thus, recent studies allow for more rigorous examination of factors associated with the process of unionization.

As outlined earlier, the following review includes studies of private and public sector, white and blue collar, professional and nonprofessional employees. The literature pertaining to these four subgroups is reviewed without distinguishing among them since it appears that *initially* there are no subgroup differences (see the earlier discussion in Chapter I); not separating studies by subgroups is also highly helpful, as it allows a weight of evidence to emerge about different variables where, in some instances, trends might otherwise not be apparent if the subgroups were treated separately. Since the objective of the present study is to understand attitudinal and behavioral factors that explain the union representation voting of individuals, it was decided to include in the literature review that follows studies which examined determinants of employees' voting behavior, voting intention, and attitudes toward unions. As shown in Table 1, the 45 studies reviewed herein examined as their _final_ dependent variable either voting behavior, voting intention, attitude toward unions (typically attitude toward unions or union commitment), or collective bargaining goal preference (i.e., given union representation, I would prefer a union to pursue these issues). For the purpose of this review, the _final_ dependent variable is defined as that sequentially closest to actual representation election voting behavior, using the voting model proposed herein (see Figure 5 and its related discussion). Although many of the studies which are reviewed here examined multiple dependent variables, these variables are so highly intercorrelated in every instance that just the final dependent variable results are reported. [Parenthetically, one study (Herman, 1973) was not reviewed because it involved only a reanalysis of an earlier study (Getman, Goldberg, & Herman, 1976). Also, LeLouarn's (1980) study of union representation voting behavior was not included since a more detailed analysis of the same data set was presented in DeCotiis and LeLouarn (1981). Finally, some studies were not selected because they were not

Table 1. Summary of 45 Prounion Attitude and Voting Studies Selected for Review.

	Final Dependent Variable						Sector			
Study	Voting Behavior	Voting Intention	Attitude Toward Unions	Union Member Attitudes	Union Commitment	Collective Bargaining Goal Preference	Public	Private	Both	Unknown
Allen & Keaveny (1981)			x				x			
Antos et al. (1980)				x					x	
Beutell & Biggs (1984)			x					x		
Bigoness (1978)			x				x			
Bigoness & Tosi[a] (1984)	x						x			
Brett (1980)		x								x
Chacko & Greer (1982)				x					x	
Coffinberger (1981)			x				x			
Dayal (1982)						x	x			
DeCotiis & LeLouarn (1981)	x							x		
Duncan & Leigh (1980)				x						x
Duncan & Stafford (1980)				x						x
Farber & Saks (1980)	x							x		
Feuille & Blandin (1974)			x				x			
Flango (1975)		x					x			
Freeman (1980)				x				x		
Fukami & Larson (1984)					x			x		

Table 1. Continued.

Study	Final Dependent Variable						Sector			
	Voting Behavior	Voting Intention	Attitude Toward Unions	Union Member Attitudes	Union Commitment	Collective Bargaining Goal Preference	Public	Private	Both	Unknown
Getman et al. (1976)	x							x		
Gomez-Mejia & Balkin (1984)				x			x			
Gordon & Long (1981)				x			x			
Gordon et al. (1980)					x		x			
Hammer & Berman (1981)	x							x		
Hamner & Smith (1978)		x						x		
Harrison et al. (1981)	x							x		
Herman & Skinner (1975)	x						x			
Hills (1985)		x						x		
Kleingartner (1973)			x						x	
Kochan (1979)			x					x		
Ladd & Lipset (1973)			x						x	
Lawler & Walker (1980)			x				x			
Lawler & Walker (1983)		x					x			
Lee (1978)				x						x
Martin (1984)	x						x			
Martin (1985)			x				x			

Table 1. Continued.

	Final Dependent Variable									
Study	Voting Behavior	Voting Intention	Attitude Toward Unions	Union Member Attitudes	Union Commitment	Collective Bargaining Goal Preference	Sector Public	Sector Private	Sector Both	Sector Unknown
Maxey & Mohrman (1980)			x							x
Muczyk et al. (1975)	x						x			
Odewahn & Petty (1980)				x			x			
Ponak & Janz (1984)			x						x	
Schmidt & Strauss (1976)				x						x
Schriesheim (1978)	x							x		
Seeber (1981)				x						x
Smith & Hopkins (1979)			x				x			
Walker & Lawler (1979)		x					x			
Youngblood et al. (1984)		x								x
Zalesny (1985)	x						x			
Total Number:	11	7	13	11	2	1	20	12	5	8

[a] Bigoness & Tosi (1984) studied a union decertification election rather than a union representation election. This study is included because their sample and the comparison sample used in the present study are the same and because they examined many of the same variables examined in the present study.

considered directly relevant to the present study; studies of elections outside the United States (Beaumont, 1981; Chafetz & Frazer, 1979) and three decertification election studies (Anderson, Busman, & O'Reilly, 1979, 1982; Chafetz & Frazer, 1979). One decertification election study was included (Bigoness & Tosi, 1984) because it used the same sample as employed in the present study for comparison purposes, and because it examined many of the same variables examined in the current study. The inclusion of this decertification election study does not materially alter conclusions of this review, however.]

Three of the 45 relevant studies uncovered and reviewed here (7 percent; Antos, Chandlers, & Mellow, 1980; Freeman, 1980; Martin, 1985) used aggregated data collection methods (explained below). The rest of the studies used individual data collection methods (clarified below), involving either a survey questionnaire or individual interviews. Forty-four percent of the studies examined the public sector (20/45), 27 percent examined the private sector (12/45), 11 percent sampled both the public and private sectors (5/45), and 18 percent did not identify the sector sampled (8/45).

The structure for this review of the union representation election literature is based on a proposed model of the unionization process (see Figure 5) which postulates that voting is the behavioral outcome of a process which has as its antecedents personal characteristics, work environment, attitude toward unions, union instrumentality, and intended voting behavior. The literature pertaining to each model variable is summarized separately; this is followed by a review of previous unionization process models and, finally, by a discussion of the proposed unionization process model.

Before beginning the literature review, it needs to be pointed out that only individual-level studies are pertinent to the model to be examined here and are therefore reviewed below. Election-level outcome studies, where the dependent variable is the election outcome and the research question is whether the union representation election was won or lost by the union, do not focus on the individual voter as the unit of analysis and do not attempt to predict or explain the attitudes or behaviors of individuals (Heneman & Sandver, 1983). In contrast, in individual-level studies the dependent variable is the voting behavior of individuals and the individual is the unit of analysis (Youngblood, DeNisi, Molleston, & Mobley, 1984). Here, the research question is what were the factors that determined whether an employee voted for or against union representation (Heneman & Sandver, 1983). Thus, election-level outcome studies and individual-level outcome studies explore different research questions and speak to different issues. In addition, depending upon the unit of analysis, different explanatory variables are examined and different data collection methods are used (Fiorito & Greer, 1982). Since the current study attempts to explain individual attitudes and behaviors, and since it is possible that the results from election-level studies may not generalize to individual-level studies, election-level studies are not considered pertinent to this investigation and are therefore not reviewed; for the reader's information, however, these studies are briefly summarized in Table 2. [Parenthetically, as noted in Table 2, an aggregated data collection method typically occurs when the researcher uses administrative agency records (e.g., NLRB or PERB) and state and national summary statistics (e.g., Michigan Panel Study of Income Dynamics; Current Population Surveys; National Longitudinal Survey) to gather his/her data (Fiorito & Greer, 1982). This is apparently the primary data collection method used in election-level outcome studies (Heneman & Sandver, 1983); this is evidenced by the fact that all 18 studies conducted since 1972, shown in Table 2, used this approach. Individual data collection methods, on the other hand, survey individual workers about their attitudes, intentions, bargaining agent preferences, and behaviors by using questionnaires, interviews, and/or observations (Fiorito & Greer, 1982). This is the primary data collection method in individual-level outcome studies (Heneman & Sandver, 1983), and it was used in 42 of the 45 studies reviewed below.]

Table 2. Summary of 18 Cross Sectional Union Representation Election-Level Studies, 1972 - 1985.

	Data Collection Method	Data Collection Timing
Study	Aggregated[a]	Post-Election[b]
Becker & Miller (1981)	x	x
Block & Roomkin (1982)	x	x
Chaison (1973)	x	x
Cooke (1983)	x	x
Delany (1981)	x	x
Greer & Shearer (1981)	x	x
Hyclak (1982)	x	x
Lawler (1982b)	x	x
Lawler & Walker (1984)	x	x
Mitchell (1980)	x	x
Prosten (1979)	x	x
Roomkin & Block (1981)	x	x
Roomkin & Juris (1979)	x	x
Rose (1982)	x	x
Sandver (1977)	x	x
Sandver (1980)	x	x
Sandver (1981)	x	x
Sandver (1982)	x	x

Note: Election outcome, either for or against the union, was the dependent variable.

[a] Aggregated data were collected from administrative agencies (e.g., NLRB or PERB) and/or from state and national summary statistics.

[b] Post-election is defined as after the union representation election.

Individual-Level Studies

Personal Characteristics

The increased treatment of unionization as a process with multiple determinants had led most research to treat personal characteristics as independent variables in a chain of relationships which culminate in individual voting intention and/or behavior. This is evidenced by the position of these variables in many unionization process models, by their assessment in virtually all empirical investigations, and by the methods of analysis that are typically used in attempts to predict voting intention and behavior. Generally, personal characteristics have been viewed as having indirect effects on individual attitudes, perceptions, and behaviors (see Fiorito & Greer, 1982; Heneman & Sandver, 1983; Kochan, 1980; and Lewin & Feuille, 1983, for reviews of this literature).

Personal characteristics variables. Unionization research has attempted to determine the primary personal characteristics associated with prounion attitudes and election outcomes. The most frequently examined variables have been an individual's sex, race, marital status, number of dependents, age, number of years in current occupation, organizational tenure, highest educational level obtained, and pay level. To a much lesser extent, signing a union authorization card has been assessed. And, in higher education faculty unionization literature, teaching area (e.g., arts, sciences, professions) has been examined by a number of studies. Of the 45 studies reviewed herein, 34 (76 percent) have included one or more of these variables (see Table 3). Nine of the studies that examined personal characteristics used voting behavior as the final dependent variable (Bigoness & Tosi, 1984; DeCotiis & LeLouarn, 1981; Farber & Saks, 1980; Getman et al., 1976; Hammer & Berman, 1981; Herman & Skinner, 1975; Martin, 1984; Muczyk, Hise, & Gannon, 1975; Zalesny, 1985), 3 studies used voting intention (Flango, 1975; Hills, 1985; Youngblood et al., 1984), 9 studies examined attitude toward unions (Allen & Keaveny, 1981; Bigoness, 1978; Feuille & Blandin, 1974; Kochan, 1979; Ladd & Lipset, 1973; Martin, 1985; Maxey & Mohrman, 1980; Ponak & Janz, 1984; Smith & Hopkins, 1979), 10 studies used union member attitudes (Antos et al., Chacko & Greer, 1982; Duncan & Leigh, 1980; Duncan & Stafford, 1980; Gomez-Mejia & Balkin, 1984; Gordon & Long, 1981; Lee, 1978; Odewahn & Petty, 1980; Schmidt & Strauss, 1976; Seeber, 1981), 2 studies investigated union commitment (Fukami & Larson, 1984; Gordon, Philpot, Burt, Thompson, & Spiller, 1980), and one study examined collective bargaining goal preference (Dayal, 1982). Although these studies investigated six different final dependent variables, they are treated the same in this review since these dependent variables are typically very highly correlated.

Twenty-one of the 34 studies (62 percent) that examined demographic variables included respondent sex (see Table 3).

Table 3. Summary of Personal Characteristics Associated with Prounion Attitudes and Voting in 34 Individual-Level Union Attitude and Election Studies.

											Teaching Area			
Study	Sex*	Race*	Marstu*[a]	Dep[b]	Age	Yrocc[c]	Tenure*	Educ[d]	Pay	Autho*[e]	Arts*[f]	Sci*[g]	Proff*[h]	Other*[i]
Allen & Keaveny (1981)	?[j]				-[k]		-		-					
Antos et al. (1980)	+[l]	-			+			-						
Bigoness (1978)	?				-				-		?	?	?	?
Bigoness & Tosi[m] (1984)	-			ns[n]	ns		ns		ns		ns	ns	ns	ns
Chacko & Greer (1982)	-	-			+									
Dayal (1982)									-					
DeCotiis & LeLouarn (1981)		ns			+			+						
Duncan & Leigh (1980)			+	+				+	-					
Duncan & Stafford (1980)	+	+				+		-	-					
Farber & Saks (1980)	+	-			ns		ns	ns	ns					
Feuille & Blandin (1974)	+			+	-		-		-		ns	ns	ns	ns
Flango (1975)									-					
Fukami & Larson (1984)					ns	+	ns	ns						
Getman et al. (1976)	+	-	ns		-		-	ns	-	+				
Gomez-Mejia & Balkin (1984)	-					-	-		-					
Gordon & Long (1981)	ns				ns				-					
Gordon et al. (1980)	+	-	+	+	+			-	-					
Hammer & Berman (1981)	ns				ns		ns		ns		ns	ns	ns	ns

Table 3. Continued.

Study	Sex*	Race*	Marstu*^{a}	Dep^b	Age	Yrocc^c	Tenure*	Educ^d	Pay	Autho*^{e}	Teaching Area Arts*^{f}	 Sci*^{g}	 Proff*^{h}	 Other*^{i}
Herman & Skinner (1975)							?	?	-		?	?	?	?
Hills (1985)		-	-			+		?	+					
Kochan (1979)	-	-			-			-	-					
Ladd & Lipset (1973)					-		-		-		+	-	-	
Lee (1978)	+	?				+		?	-					
Martin (1984)	-	-			-	-								
Martin (1985)					+	+								
Maxey & Mohrman (1980)					-		-	-	-					
Muczyk et al. (1975)					?	?					-	-	-	+^{o}
Odewahn & Petty (1980)	ns				ns	?	?	-	-					
Ponak & Janz (1984)	+	-			+			+						
Schmidt & Strauss (1976)	+	-				-		-	+					
Seeber (1981)	-	-				-		+	ns					
Smith & Hopkins (1979)							ns	ns	-					
Youngblood et al. (1984)	ns	ns				+			ns					
Zalesny (1985)										?				

Table 3. Continued.

											Teaching Area			
Study	Sex*	Race*	Marstu*[a]	Dep[b]	Age	Yrocc[c]	Tenure*	Educ[d]	Pay	Autho*[e]	Arts*[f]	Sci*[g]	Proff*[h]	Other*[i]
Total Number of Studies	21	15	4	4	21	12	13	18	25	2	7	7	7	6
Total Nonsignificant Results	6	3	1	1	7	2	7	7	5	1	5	5	5	5
Total Significant Results	15	12	3	3	14	10	6	11	20	1	2	2	2	1
Total Negative Results	6	11	1	0	8	4	6	7	18	0	1	2	2	0
Total Positive Results	9	1	2	3	6	6	0	4	2	1	1	0	0	1

[a] Marstu = marital status. [b] Dep = number of dependents. [c] Yrocc = years in occupation. [d] Educ = highest educational level obtained. [e] Autho = signing a union authorization card. [f] Arts = fine arts, journalism and communication, liberal arts and sciences. [g] Sci = sciences; biology, agriculture, forest resources and conservation, mathematics. [h] Proff = professional; business, education, legal, medical, physical education, accounting. [i] Other = nonclassified. [j] ? = effect unknown; not reported. [k] - = significant negative effect. [l] + = significant positive effect. [m] Bigoness & Tosi (1984) was a union decertification election rather than a union representation election. [n] ns = no significant effect. [o] teach in school of education.

*Dummy Coded Personal Characteristics: Sex: 0 = female, 1 = male. Race: 0 = nonwhite, 1 = white. Marstu: 0 = unmarried, 1 = married. Tenure: 0 = no, 1 = yes. Autho: 0 = did not sign, 1 = did sign. Arts, Sci, Proff, Other: 0 = not in area, 1 = in area.

Of these studies, 15 had statistically significant results and 6 were nonsignificant. Of the significant findings, 6 studies suggested that females were more positive toward unions than males. However, 9 studies reported that males were more favorable toward unions than females. Consequently, on an overall basis one cannot conclude that one sex is more or less likely to be more prounion.

Respondent race (nonwhite versus white) was examined in 15 of the 34 studies (44 percent), of which 3 produced nonsignificant results, while 12 obtained statistical significance (see Table 3). One study reported that white employees were significantly more prounion than nonwhite employees. However, 11 studies suggested that nonwhite employees were more prounion than whites. Hence, given the consistency of results, it seems reasonable to conclude that minority employees may be more favorable toward unions than white employees. Kochan (1979), for example, concluded that in a comparison of nonwhites and whites, nonwhites preferred union representation two-to-one.

As shown in Table 3, marital status was investigated in 4 (12 percent) studies, as was the number of dependents. In both cases, one study reported nonsignificant results and 3 studies found statistically significant results. Being unmarried was associated with being more prounion in one study, but being married suggested being prounion in two other instances. All three of the significant number of dependent results indicated that the more dependents an employee had the more favorably the employee viewed unions. Thus, even though these two demographic variables were not investigated in the majority of studies, it tentatively appears that the number of one's dependents has a positive influence on prounion attitudes and behaviors. However, the effect of marital status seems unclear since the results are contradictory.

An individual's age has been assessed in 62 percent (21/34) of the studies that investigated personal characteristics, of which 14 (67 percent) reported statistically significant relationships (see Table 3). Eight findings suggested that younger (less than 30 years old in most cases) employees viewed unions more favorably than older employees. On the other hand, 6 studies reported that older employees held more positive views of unions than did younger employees. Hence, the empirical results are contradictory and no conclusion can be made about the effect of an individual's age on the unionization process.

Twelve of the 34 studies reviewed (35 percent) examined the number of years in the current occupation (see Table 3). Response choices varied from less than 6 months to more than 20 years. Results indicted that 2 studies found no significant differences across groups. However, 10 studies reported significant differences. Four researchers reported that employees with fewer years in their current occupation were more positive toward unions than were employees with more years. But, 6 studies reported that employees with more years in their current occupation were more positive toward unions than were employees with fewer years. Thus, these results seem to conflict. It should be noted, however, that the operational definition of what are "a few years" versus "more years" was idiosyncratically determined by each researcher in these studies (in one investigation a researcher defined "a few years" as less than 5, whereas another treated 5 years as constituting "many years;" also, most researchers did not report their response ranges). Thus, there is no clear interpretation of what this variable means and, given the mixed results noted above, no conclusions can be reached about this variable.

The same interpretational problems that plague the number of years in a current occupation variable (see above) also occur with respect to organizational tenure. There has been no consistency in response ranges nor in what constituted more or less years of organizational tenure. Additionally, of the 13 studies that examined organizational tenure (see Table 3), 7 reported nonsignificant results. However, 6 studies did report significant results suggesting that employees with fewer years of organizational tenure were more favorable toward unions. Thus, the significant results are consistent, but the problems noted above prevent drawing anything but tentative conclusions from this research as a whole.

As indicated in Table 3, educational level has been examined in 18 of the 34 studies (53 percent). Depending on the sample, education response choices have ranged from a low of "some high school but no degree" to a high of "a doctoral degree." Seven of the study results were nonsignificant, but 11 were statistically significant. However, 7 of the significant results suggest that employees with fewer years of education view unions more favorably, while 4 studies reported the exact opposite. Thus, these generally mixed results preclude drawing any firm conclusions about the impact that educational level may have on union attitudes or election outcomes.

Twenty-five studies (74 percent) evaluated the effects of pay on worker attitudes, perceptions, and behaviors (see Table 3). Five studies reported nonsignificant results and twenty reported statistically significant findings. Fifteen of these studies examined pay level (e.g., absolute pay level; perceived relative pay level) and concluded that employees with low pay levels were more favorably disposed toward unions than were employees with moderate or high pay levels (Allen & Keaveny, 1981; Bigoness, 1978; Dayal, 1982; Feuille & Blandin, 1974; Flango, 1975; Getman et al., 1976; Gomez-Mejia & Balkin, 1984; Gordon & Long, 1981; Gorden et al., 1980; Herman & Skinner, 1975; Ladd & Lipset, 1973; Lee, 1978; Maxey & Mohrman, 1980; Odewahn & Petty, 1980; Smith & Hopkins, 1979). Two studies assessed pay equity (i.e., whether received wages are impartial, unbiased, or fair) and found that employees who felt their pay was inequitable were more prounion than were employees who felt their pay was equitable (Duncan & Leigh, 1980; Duncan & Stafford, 1980). And, Kochan (1979) examined both pay level and pay equity and found that employees with low pay levels and employees who believed their pay was inequitable both were more positive toward unions than were employees with either moderate or high pay levels or employees who felt their pay was equitable. Contrary to the foregoing consistent results, two studies reported that higher pay levels were related to prounion responses (Hills, 1985; Schmidt & Strauss, 1976). However, these positive results may be due to the design of these two studies. Hills (1985) examined perceived pay adequacy among union and nonunion workers. Hills does not indicate the ratio of union-to-nonunion workers, creating the plausible explanation for his results that they were biased by an over-representation of higher paid (and pay satisfied) unionized work force. Lending support to this interpretation of the Hills (1985) results are those of Schmidt and Strauss (1976). Schmidt and Strauss (1976) compared union and nonunion member attitudes and perceptions and found that union members had higher pay levels and had prounion attitudes, whereas nonunion members had lower pay levels and had antiunion attitudes. Thus, it is possible that the Hills (1985) and Schmidt and Strauss (1976) results should not be considered inconsistent with the bulk of the significant findings in this area, but rather as being concerned with an entirely different issue. Thus, on an overall basis it appears that pay level and equity are negatively related to prounion attitudes and behaviors.

As indicated in Table 3, signing a union authorization card was investigated in only 2 studies. Although Zalesny (1985) did not report her findings, Getman et al. (1976) reported a significant positive association between prounion voting and signing a union authorization card. Given the lack of empirical evidence, no firm conclusion can be made about the effect of this variable on the unionization process. However, as discussed later in Chapter V, this variable would seem to be positively related to prounion attitudes and behavior, on a theoretical basis.

Eleven of the 34 studies that examined personal characteristics sampled higher education faculty. Of these 11 studies, 7 (64 percent) investigated the effect of teaching area on prounion sentiments (see Table 3). Two found statistically significant results. Ladd and Lipset (1973) conducted a two-stage survey of faculty opinions on faculty unionism. The first stage occurred in 1969 and was a national, cross-sectional survey of 60,000 faculty members in two-year, four-year, and four-year plus public and private institutions. (Two-year institutions are community colleges; four-year institutions are colleges that offer a bachelor degree as the highest degree; and four-year plus institutions are universities that offer graduate degrees.) The second stage occurred during 1972-1973, when 471 of the first survey's respondents (in four-year and four-year plus institutions) were interviewed to assess how their faculty unionism opinions had changed in the intervening years.

Ladd and Lipset (1973) found a positive relationship between faculty who taught in the arts area (e.g., fine arts, journalism and communication, liberal arts and sciences) and prounion responses, but a negative relationship for faculty who taught in the sciences (e.g., agriculture, forest resources and conservation, biology, mathematics) and in the professions (e.g., business, education, legal, medical, engineering, physical education, accounting). These authors concluded that scholarly discipline was one of the most important factors in determining faculty opinions (Ladd & Lipset, 1973, p. 38). Ladd and Lipset reasoned that different academic fields attract different types of students and practitioners, and that professional training and experiences define interests which serve as points of reference. Thus, "social sciences . . . have recruited from the more liberal segment of undergraduates, whereas at the other extreme, professional fields . . . draw upon the more conservative students" (1973, p. 40). The Ladd and Lipset (1973) rationale was based on their results, suggesting that the social sciences were the most supportive of faculty unionism, followed by humanists, then natural scientists, and finally the most hostile to faculty unionism were professors in business-related fields.

Muczyk et al. (1975) conducted an investigation of Pennsylvania's higher education public sector faculty and found results similar to Ladd and Lipset (1973). That is, faculty who taught in the sciences were found to express antiunion opinions. However, unlike Ladd and Lipset (1973), Muczyk et al. (1975) found a negative association between faculty in the arts area and prounion sentiments. In addition, these authors reported that faculty responses in the professional fields were negatively related to prounionism except for education faculty, who were prounion.

Although Ladd and Lipset (1973) and Muczyk et al. (1975) found faculty teaching area to have a significant effect on the unionization process, 5 other studies found that faculty teaching area had nonsignificant effects (Bigoness, 1978; Bigoness & Tosi, 1984; Feuille & Blandin, 1974; Hammer & Berman, 1981; Herman & Skinner, 1975). Consequently, the results with respect to this variable are mixed and preclude any firm conclusions about the impact of faculty teaching area on union attitudes and election outcomes.

Summary. Although personal characteristics have been regarded as having indirect effects on attitudinal, perceptual, and behavioral dimensions related to the unionization process, the direction, magnitude, and significance of the effects are generally not strong or clear. The most frequently examined demographic variables, sex and age, provide only mixed results. Educational level and number of years in current occupation have no consistent trends or operationalizations across studies, so drawing comparisons seems unwarranted. The number of years of organizational tenure appears to have consistent results, but there is no consistent operationalization of that variable. Marital status and number of dependents have only been examined in 12 percent of the studies, and even though the number of dependents appears to influence prounion attitudes and behaviors it would be premature to draw a firm conclusion here (the marital status results were contradictory, so that no conclusion can be made about this variable). Signing a union authorization card was examined in only 6 percent of the studies, and thus a lack of evidence prevents drawing conclusions. Faculty teaching area has been examined. However, mixed results here also prevent firm conclusions. Finally, only race and pay appear to be clearly related to unionization attitudes and behaviors. Eleven of the 15 studies (73 percent) examining race reported that nonwhite employees had more prounion responses than did white employees. Also, 18 of the 25 studies (72 percent) assessing pay found that low pay level and/or pay inequity were positively related to prounion attitudes, perceptions, and behaviors. Thus, the effects of most of the personal characteristics on the unionization process appear weak or unclear, but race and pay do seem important in this regard. [Although election-level studies are not reviewed here, and while election-level studies generally look at different variables than do individual-level studies, a number of the election-level studies reported in Table 2 (p. 40) do lead to similar conclusions about the variables summarized above.]

Work Context

In addition to the personal characteristic variables that have been investigated in unionization process research, work context variables have also been examined (see Fiorito & Greer, 1982; Heneman & Sandver, 1983; Kochan, 1980; and Lewin & Feuille, 1983, for reviews of the literature on work context variable). Generally, work context has been viewed as a set of variables which have both direct and indirect effects on employee unionism attitudes, perceptions, and behaviors. Included, for example, in this area are such variables as job satisfaction, organizational commitment, and psychological stress. Work context variables have not been consistently operationalized across studies, but these differences are not treated here. Variable operationalization is covered in more detail in Chapter V, however, where considerable commentary is directed at shortcomings in the bulk of the research conducted in this general domain to-date.

Work context variables.

Unionization process research has attempted to determine the primary work context variables associated with prounion attitudes and voting behaviors. The most frequently examined variables have been an individual's trust in the employing organization's administration, organizational commitment, and job satisfaction.

To a much lesser extent, individual psychological stress and perceived mobility (psychological ability and willingness to move) have been assessed. As shown in Table 4, only 32 of the 45 studies reviewed herein (71 percent) have included on or more of these variables. Of these 32 studies, 11 examined voting behavior as the final dependent variable (Bigoness & Tosi, 1984; DeCotiis & LeLouarn, 1981; Farber & Saks, 1980; Getman et al., 1976; Hammer & Berman, 1981; Harrison, Johnson, & Rachel, 1981; Herman & Skinner, 1975; Martin, 1984; Muczyk et al., 1975; Schriesheim, 1978; Zalesny, 1985), 5 investigated voting intention (Brett, 1980; Hamner & Smith, 1978; Hills, 1985; Walker & Lawler, 1979; Youngblood et al., 1984), 10 studies evaluated attitudes toward unions (Allen & Keaveny, 1981; Bigoness, 1978; Coffinberger, 1981; Feuille & Blandin, 1974; Kleingartner, 1973; Kochan, 1979; Ladd & Lipset, 1973; Lawler & Walker, 1980; Maxey & Mohrman, 1980; Smith & Hopkins, 1979), 3 examined union member attitudes (Gomez-Mejia & Balkin, 1984; Gordon & Long, 1981; Odewahn & Petty, 1980), 2 evaluated union commitment (Fukami & Larson, 1984; Gordon et al., 1980), and one study investigated collective bargaining goal preference (Dayal, 1982). As mentioned earlier, due to the extensive intercorrelation typically found among these dependent variables (DeCotiis & LeLouarn, 1981; Gordon et al., 1980; Hammer & Berman, 1981), all these studies are treated the same. And, with the exception of organizational commitment, the obtained results

Table 4. Summary of Selected Work Context Variables and Other Variables of Interest Associated with Prounion Attitudes and Voting in 37 Individual-Level Union Attitude and Election Studies.

Study	Trust^{a}	Orgcom^{b}	Stress	Ecosat^{c}	Nonecosat^{d}	Mobility^{e}	Uatt^{f}	Inst^{g}	Voice
Allen & Keaveny (1981)				-^{h}	-		+^{i}	+	
Beutell & Biggs (1984)							+	+	
Bigoness (1978)				-	-				
Bigoness & Tosi^{j} (1984)		ns^{k}		ns	ns		+	+	
Brett (1980)				-	-			+	
Chacko & Greer (1982)								+	
Coffinberger (1981)	-						+		-
Dayal (1982)				-	-				
DeCotiis & LeLouarn (1981)	-	-	+	-				+	-
Farber & Saks (1980)				-				+	
Feuille & Blandin (1974)	-			-	-				
Flango (1975)								+	-
Freeman (1980)									-
Fukami & Larson (1984)			ns						
Getman et al. (1976)				-	-		+	+	
Gomez-Mejia & Balkin (1984)				-					
Gordon & Long (1981)				-	-		+		
Gordon et al. (1980)		+					+		

Table 4. Continued.

Study	Trust[a]	Orgcom[b]	Stress	Ecosat[c]	Nonecosat[d]	Mobility[e]	Uatt[f]	Inst[g]	Voice
Hammer & Berman (1981)	-			-	-				
Hamner & Smith (1978)				-	-				
Harrison et al. (1981)					ns				
Herman & Skinner (1975)	-			-	-				
Hills (1985)				-	-				
Kleingartner (1973)				-	-				
Kochan (1979)				-	-		+	+	
Ladd & Lipset (1973)	-								
Lawler & Walker (1980)		ns				-	+	+	-
Lawler & Walker (1983)								+	
Martin (1984)		-		-	-				
Maxey & Mohrman (1980)				-	-		+		-
Muczyk et al. (1975)				-	ns				
Odewahn & Petty (1980)			+	-	-				
Schriesheim (1978)				-	-		+	+	
Smith & Hopkins (1979)		-		-					
Walker & Lawler (1979)	-	+		ns					-

Table 4. Continued.

Study	Trust[a]	Orgcom[b]	Stress	Ecosat[c]	Nonecosat[d]	Mobility[e]	Uatt[f]	Inst[g]	Voice
Youngblood et al. (1984)				ns	ns		+	+	
Zalesny (1985)	-			-	-			+	-
Total Number of Studies	8	7	3	26	22	1	12	15	8
Total Nonsignificant Results	0	2	1	3	4	0	0	0	0
Total Significant Results	8	5	2	23	18	1	12	15	8
Total Negative Results	8	3	0	23	18	1	0	0	8
Total Positive Results	0	2	2	0	0	0	12	15	0

[a] Trust = trust in the organization's administration. [b] Orgcom = organizational commitment. [c] Ecosat = economic job satisfaction (company policies and practices, compensation, security, working conditions). [d] Nonecosat = noneconomic job satisfaction (achievement, creativity, independence, variety). [e] Mobility = psychological ability and willingness to leave the organization/institution. [f] Uatt = attitude toward unions. [g] Inst = perceived union instrumentality. [h] - = significant negative effect. [i] + = significant positive effect.

[j] Bigoness & Tosi (1984) was a union decertification election rather than a union representation election.

[k] ns = no significant effect.

have been fairly consistent across studies (these are discussed below).

Trust in the employing organization's administration has been examined in 8 of the 32 studies (25 percent) that investigated work context variables (see Table 4). All of the 8 studies reported statistically significant negative results, indicating that employees with low levels of trust in the employing organization's administration were more prounion than were employees with moderate or high levels of trust. Although this does not affect the conclusions which may be drawn, it should perhaps be noted that this consistency in results has occurred despite substantial inconsistencies in the operationalization of this variable across the studies.

Table 4 shows that organizational commitment (e.g., organizational loyalty and identification) was examined in 7 of the 32 studies (22 percent), of which 2 reported nonsignificant findings and 5 reported statistically significant results. Three significant findings involved employees with low organizational commitment having more prounion responses than employees with moderate or high levels of organizational commitment. However, 2 significant results support the exact opposite. Furthermore, not only are the organizational commitment results mixed, but no consistent operationalization of this variable has been used. Thus drawing conclusions about the impact of an individual's organizational commitment on the unionization process is risky and appears unwarranted.

Job-related psychological stress (e.g., felt pressure to produce; inequitable job-related demands) has been examined in 3 of the 32 studies (9 percent) that investigated work context variables (see Table 4). One study reported nonsignificant results, but 2 studies reported a statistically significant positive relationship between job-related psychological stress and prounion attitudes and behaviors. That is, employees with prounion responses had significantly higher levels of perceived psychological stress than did employees who were antiunion. However, even though this work context variable was reported as significant in these two studies, the effect of job-related psychological stress seems unclear as two studies hardly constitutes an abundance of empirical evidence.

As shown in Table 4, job satisfaction was the most investigated work context variable. Twenty-seven of the 32 studies (84 percent) examined job satisfaction, with 26 of the studies (96 percent) assessing economic job satisfaction (e.g., compensation, job security) and 22 of the studies (82 percent) investigating noneconomic job satisfaction (e.g., achievement, creativity). Three studies of economic job satisfaction reported nonsignificant results, but 23 studies (89 percent) reported that employees with low economic job satisfaction had significantly more prounion attitudes, perceptions, and behaviors than did employees with moderate or high levels of economic job satisfaction. And, 4 studies of noneconomic job satisfaction reported nonsignificant results, but 18 of the studies (82 percent) reported that employees with low noneconomic job satisfaction had significantly more prounion responses than did employees with moderate or high levels. Thus, although this variable has been operationalized in different ways, the consistency of the findings suggest that employees experiencing job dissatisfaction (economic and/or noneconomic) would be more likely to have prounion attitudes and perceptions, and demonstrate prounion voting behavior.

Psychological mobility (e.g., usefulness of present job knowledge and ability to other employers) was examined in only one of the 32 studies (3 percent) that investigated work context variables (see Table 4). Lawler and Walker (1980) investigated unionism and collective bargaining attitudes with a public sector higher educational faculty sample. These authors defined respondents with a high perceived mobility as those who saw excellent to fair alternative labor market opportunities. And, respondents with low perceived mobility were defined as those who saw poor or very poor alternative labor market opportunities. The results indicated that perceived mobility had a significant negative relationship with prounion responses. That is, employees who perceived their job mobility as low were more likely to have prounion attitudes and perceptions than were employees with moderate to high perceived job mobility.

Although this result is suggestive of a possible psychological mobility effect on the unionization process, no conclusion can be reached with the findings of a single investigation.

Summary. Work context attitudes and behaviors have been viewed as having both direct and indirect effects on the unionization process. As noted above, except for organizational commitment, the obtained empirical results have been fairly consistent.

The most frequently examined work context variable, job satisfaction, appears to have a significant negative effect on prounion attitudes, perceptions, and behaviors. Hence, employees who experience economic and/or noneconomic job dissatisfactions are more likely to be prounion. The same significant negative effect on prounion responses was found with an individual's trust in the employing organization's administration. Here, employees with low levels of trust were more likely to express prounion sentiments than were employees with moderate or high trust levels. Thus, it seems warranted to conclude that job satisfaction and trust in the employing organization's administration are important work context variables.

Although only examined in one study, psychological mobility was found to be negatively associated with prounion attitudes and perceptions, such that employees with low perceived mobility may be more likely to be prounion.

Psychological job-related stress was found to have a significant positive relationship with prounion responses in two studies, hinting that employees with high levels of psychological job-related stress may be more likely to have prounion opinions. Finally, the organizational commitment results were contradictory, and no conclusions can be drawn about this variable at all. Thus, the effect of many of the work context variables on the unionization process appear weak and unclear, but job satisfaction and trust in the employing organization's administration do seem particularly important in this regard.

Attitude Toward Unions

As noted above, the increased recognition and treatment of unionization as a process with multiple determinants had led unionism researchers to examine many attitudinal and behavioral variables. Attitudes toward unions have been increasingly included in the examination of relationships with individual voting intentions and/or voting behaviors. Generally, attitude toward unions has been conceptualized as a set of individually-held ideological beliefs about unions in general (rather than any particular labor organization) which have both direct and indirect effects on attitudinal, perceptual, and behavioral dimensions which impact on the unionization process (see Brett & Hammer, 1982; Fiorito & Greer, 1982; Heneman & Sandver, 1983; Kochan, 1980; and Lewin & Feuille, 1983, for reviews of this literature).

Included, for example, in the assessment of attitudes toward unions are such questions as union effects on job security, labor-management relations, and compensation packages (wages and fringe benefits). As in the case of the work context variables reviewed above, attitudes toward unions have not been consistently operationalized across studies (as mentioned earlier, variable operationalization is covered in Chapter V).

Assessment of attitude toward unions. Of the 45 studies reviewed herein, 12 (27 percent) have examined attitude toward unions in a manner congruent with this review (see Table 4). Although 6 of these studies (50 percent) have used attitude toward unions as a final dependent variable, they report bi-variate correlations with union instrumentality and/or voice and are therefore useful here (Allen & Keaveny, 1981; Beutell & Biggs, 1984; Coffinberger, 1981; Kochan, 1979; Lawler & Walker, 1980; Maxey & Mohrman, 1980). An additional 6 studies (50 percent) employed attitude toward unions as an independent variable. Of this latter group of studies, Bigoness and Tosi (1984), Getman et al. (1976), and Schriesheim (1978) examined voting behavior as the final dependent variable. Youngblood et al. (1984) investigated voting intention, Gordon and Long (1981) assessed union member attitudes as the final dependent variable, and Gordon et al. (1980) examined union commitment. As explained earlier, due to the extensive intercorrelations typically found among these variables, all 12 of these studies are treated the same.

All 12 of the studies (100 percent) that examined attitude toward unions reported a statistically significant positive relationship between this variable and prounion responses. That is, employees who had a positive attitude toward unions were more likely to have other prounion sentiments than were employees who had a negative attitude toward unions. In addition, employees who had prounion attitudes were more likely to report prounion voting intentions and/or prounion voting behaviors than were employees who had antiunion attitudes. Hence, given the consistency of results, it seems reasonable to conclude that employees with positive attitudes toward unions would be more likely to demonstrate other prounion attitudes and behaviors than would employees with negative attitudes toward unions. Although this does not affect the conclusions which may be drawn, it should perhaps be noted that this consistency of results has occurred despite considerable inconsistency in the operationalization of this variable across studies.

Summary. Attitudes toward unions have been regarded as having both direct and indirect effects on the unionization process and this variable has been examined in 27 percent of the studies reviewed herein. The consistency of the findings strongly suggest that employees with positive attitudes toward unions would be more likely to express other prounion responses. Thus, employees with positive union attitudes would be more likely to have favorable union instrumentality perceptions, to have prounion voting intentions, to display prounion voting behaviors, and to have other prounion sentiments. Consequently, it seems warranted to conclude that attitude toward unions has an important effect on the unionization process.

Union Instrumentality

Union instrumentality (i.e., whether a union can be instrumental in improving individual conditions of employment) is a specific union attitude that has recently been examined by a number of researchers. Typically, union instrumentality is regarded as a set of individually-held beliefs about whether a union (either a specific union or unions in general) can be effectual in improving individually valued work-related outcomes. Union instrumentality perceptions have usually been viewed as having both direct and indirect effects on attitudinal and behavioral dimensions as they affect the unionization process (see Brett & Hammer, 1982; Fiorito & Greer, 1982; and Heneman & Sandver, 1983, for reviews of this literature). Included in the assessment of union instrumentality perceptions, for example, are such work-related outcomes as job security, compensation packages, and terms and conditions of employment. As discussed in Chapter V, union instrumentality has not been consistently operationalized across studies.

Assessment of union instrumentality. Of the 45 studies reviewed herein, 15 studies (33 percent) have examined union instrumentality (see Table 4). The most frequently assessed work-related outcomes, as they relate to union instrumentality, have been job security, compensation, governance (administrative control systems), professionalism, and terms and conditions of employment. Of the 15 studies that examined union instrumentality as an independent variable, 4 investigated attitude toward unions as the final dependent variable (Allen & Keaveny, 1981; Beutell & Biggs, 1984; Kochan, 1979; Lawler & Walker, 1980), 4 assessed voting intention (Brett, 1980; Flango, 1975; Lawler & Walker, 1983; Youngblood et al., 1984), 6 examined voting behavior (Bigoness & Tosi, 1984; DeCotiis & LeLouarn, 1981; Farber & Saks, 1980; Getman et al., 1976; Schriesheim, 1978; Zalesney, 1985), and one assessed union member attitudes (Chacko & Greer, 1984).

All 15 studies that investigated union instrumentality reported a statistically significant positive association between this variable and prounion attitudes and behaviors. That is, employees who perceived unions as instrumental in improving individually valued work-related outcomes were more likely to be attitudinally prounion than were employees who did not share this positive perception. Also, employees who perceived unions as instrumental in improving work-related outcomes were more likely to report prounion voting intentions and behavior than were employees who believed that the union had either an ineffectual or detrimental effect on work-related outcomes. Although this variable was not consistently operationalized across the studies, the strength and consistency of results strongly suggests that employees with positive union instrumentality perceptions would be more likely to demonstrate other prounion attitudes and behaviors than would employees with neutral or negative union instrumentality perceptions.

Eight of the 45 studies (18 percent) reviewed herein investigated a variable closely related to instrumentality, that being a union as an influence channel or a voice mechanism (see Table 4). The basic premise is that a union offers employees a way to be heard (a voice) in situations where it is believed that no alternative mechanism exists for influencing administrative actions. Thus, unions would be instruments of collective voice and, as such, instrumental in informing the employing organization's administration of employee work-related concerns and in influencing the administration in employee-desired directions. Three of the studies that examined voice used attitude toward unions as the final dependent variable (Coffinberger, 1981; Lawler & Walker, 1980; Maxey & Mohrman, 1980), one evaluated union member attitudes (Freeman, 1980), 2 assessed voting intention (Flango, 1975; Walker & Lawler, 1979), and 2 investigated voting behavior as the final dependent variable (DeCotiis & LeLouarn, 1981; Zalesny, 1985).

All 8 studies that investigated the voice dimension reported a statistically significant negative relationship between this variable and prounion attitudes and voting intentions and behaviors. In other words, employees who believed that they had a low level of individual influence (voice) were more prounion than were employees who believed that they had moderate or high levels of voice. As with union instrumentality, these relationships were strong and held in both private and public sector samples, and across various occupational groups. Even though this variable was operationalized in different ways, the consistency of the findings suggest that employees experiencing low voice levels would be more likely to have prounion attitudes and perceptions, and demonstrate prounion voting behavior.

Summary. Union instrumentality appears to have a significant positive effect on prounion attitudes and behaviors. Thus, employees who perceive unions as instrumental in improving work-related outcomes are more likely to indicate prounion responses. And, employee voice has a significant negative effect on prounion responses. Here, employees with low levels of voice are more likely to express prounion sentiments than are employees with moderate or high voice levels. Thus, it seems that union instrumentality and employee voice are important variables in the unionization process.

Voting Intention

Intended voting behavior in the unionization process literature refers to a respondent's self-report on how he/she intends to vote in a union representation election. That is, it refers to an individual's prediction concerning his/her future voting behavior. The research conducted by Fishbein and Ajzen (Ajzen & Fishbein, 1973; Fishbein, 1967, 1973; Fishbein & Ajzen, 1972, 1974, 1975) generally support the view that an individual's actual behavior can be predicted from his/her behavioral intent. Additionally, an individual's attitude toward performing a specific behavior, such as a prounion voting intention in a union representation election, would be highly correlated with the actual performance of that behavior. And, the closer in time one's intended behavior is measured to the actual performance of the behavior, the more predictive is the intention (see Ajzen & Fishbein, 1977, for a review of this literature). Generally, union representation election voting intention is expressed in one of four ways: (1) not intending to vote; (2) intending to vote for the union; (3) intending to vote against the union; or (4) undecided.

Assessment of voting intention. Of the 45 studies included in this review, only 3 of the studies (7 percent) examined the usefulness of voting intention as a predictor of actual voting behavior (DeCotiis & LeLouarn, 1981; Getman et al., 1976; Zalesny, 1985). Results indicated a strong significant positive association between reported voting intention and actual voting behavior. That is, respondent's intended voting behavior closely matched their reported actual voting behavior. The consistency of the findings suggest that employees actually vote as intended in a union representation election.

Summary. An individual's self-report of how he/she intends to vote in a union representation election appears to have a strong significant positive association with self-reported actual voting behavior. Consequently, it seems reasonable to conclude that voting intention is an important variable in the unionization process.

Actual Voting Behavior

Actual voting behavior in the unionization process literature refers to a respondent's self-report of how he/she actually voted in a union representation election. In other words, it refers to an individual's actual voting behavior. Generally, union representation election voting behavior is expressed in one of three ways: (1) did not vote; (2) voted for the union; or (3) voted against the union. However, only voting for or against a union have been empirically assessed (see Fiorito & Greer, 1982; and Heneman & Sandver, 1983, for review of the voting behavior literature).

Assessment of actual voting behavior. Eleven (24 percent) of the 45 studies reviewed herein examined actual voting behavior in a union representation election (see

Table 2). Each of these studies used actual voting behavior as the final dependent variable of interest and compared this self-reported behavior with factual voting behavior (certified election results). Results in all studies indicated a strong significant positive association between reported and factual voting behavior, suggesting that respondents accurately disclosed how they voted in the union representation election. Thus, self-reported voting behavior appears to be strongly predictive of factual voting behavior.

Summary. An individual's self-report of how he/she voted in a union representation election appears to have a strong significant positive relationship with factual election results. Thus, it appears that respondents accurately report how they vote in a union representation election. Hence, one can conclude that reported voting behavior is an accurate indication of an election outcome; a union either wins or loses a union representation election--the final stage in the unionization process.

Unionization Process Models

Several unionization process models have recently been proposed by behavioral scientists, based on their interpretations of the literature (Brief & Rude, 1981; DeCotiis & LeLouarn, 1981; Youngblood et al., 1984; Zalesny, 1985). These process models typically postulate that work context variables, union instrumentality perceptions, attitude toward unions, and personal characteristics predict how an individual will intend to vote in a union representation election. Moreover, these models suggest that intended voting behavior will predict actual voting behavior. Taken together, these models show a consistent pattern of relationships between prounion attitude, job satisfaction, belief that unions are instrumental in obtaining valued work-related outcomes, and prounion voting behavior.

Brief and Rude (1981) developed a union certification election model based on Fishbein's (1967) theory of behavioral intentions (see Figure 1). As mentioned earlier, Fishbein and Ajzen (Ajzen & Fishbein, 1973, 1977; Fishbein, 1967, 1973; Fishbein & Ajzen, 1972, 1974, 1975) concluded that an act can be predicted from the attitude toward the act, provided that the intention is assessed toward the behavior specifically and that a long time does not intervene between the time the intent is expressed and the act is performed.

Using the Fishbein (1967) theory, the Brief and Rude (1981) model predicts that employees' attitudes toward prounion voting (Aact) are influenced by their satisfaction with the economic components of their jobs. Thus, Aact is a multiplicative function of the perceived probability that prounion voting will lead to a particular work-related consequence, and the affective evaluation of that consequence, summed across multiple consequences. That is, employer past actions provide stimulus conditions that

$$B \sim BI = \left[\sum_{i=1}^{n} B_i \, E_i \right] W_1 + \left[\sum_{i=1}^{m} NB_i \, MC_i \right] W_2$$

where:

B = overt behavior of voting for a union.

BI = the behavioral intention of voting for a union.

$\left[\sum_{i=1}^{n} B_i \, E_i \right]$ = a person's attitude toward performing the behavior; Aact.

W_1 = empirically determined regression weight.

$\left[\sum_{i=1}^{m} NB_i \, MC_i \right]$ = a person's general subjective norm toward unions; SN.

W_2 = empirically determined regression weight.

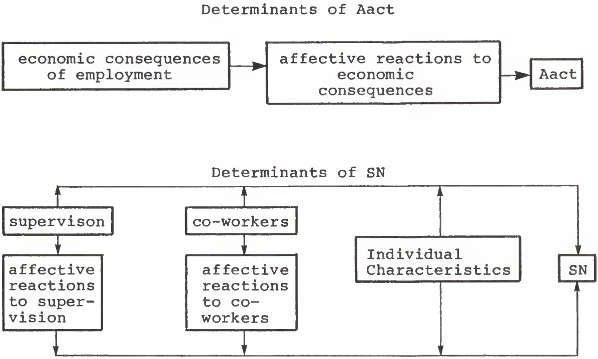

Determinants of Aact
economic consequences of employment
affective reactions to economic consequences
Aact
Determinants of SN
supervison
co-workers
affective reactions to supervision
affective reactions to co-workers
Individual Characteristics
SN

Figure 1. Model of Union Certification Voting as proposed by Brief and Rude (1981).

elicit employee responses in the form of subjective probabilities with respect to a union's instrumentality in obtaining valued work-related outcomes (Brief & Rude, 1981, p. 262). Further, that an employee's general subjective norms toward unions (SN) are a function of the social work environment, which consist of an immediate supervisor and co-workers, and of individual characteristics. Thus, SN is determined by an employee's perception of his/her supervisor's and co-workers' attitudes toward unions, the employee's desire to adopt these perceived union attitudes, and the employee's personal characteristics. Finally, Brief and Rude (1981) proposed that Aact plus SN cause the behavioral intention of voting for a union, which in turn causes the overt behavior of voting for a union in a union certification election.

The Brief and Rude (1981) union certification election model was not empirically tested by them; it has not been tested thus far, according to the best information available at this time. Therefore, it is premature to evaluate the model's ability to predict employee voting behavior. It is sufficient to say that this model reflects the Fishbein (1967) theory, as well as research findings that suggest the need to include personal characteristics, work context factors, attitude toward unions, and union instrumentality in a unionization process model. The model is not, however, particularly broad in terms of the variables it includes or the perspective it employs.

Youngbood and his associates (Youngblood et al., 1984) developed and partially tested a model of union voting intention (see Figure 2). This model is composed of four key constructs: the motivating potential of a job and job satisfaction (trigger), union instrumentality perceptions (augmenter), union image (veto), and perceptions of referent others (subjective norms). These four constructs, along with demographic factors, are hypothesized to influence union representation election voting intention.

The Youngblood et al. (1984) model suggests that employees will intend to vote prounion only when the trigger, augmenter, and veto conditions are jointly satisfied. In other words, Youngblood and his associates postulate that a four-way interaction between motivating potential, job satisfaction, union instrumentality beliefs, and labor union image must occur. Thus, for an employee to express prounion voting intentions, he/she must perceive low motivating potential in his/her job, be dissatisfied, perceive unions as instrumental, and hold a positive image of labor unions in general. However, subjective norms may moderate voting intention. Although subjective norms was portrayed in the schematic diagram of the model as having a direct influence on voting intention, the authors verbally present this variable as a moderator of individual intentions to vote. That is, an employee may intend to vote against the union, despite a low motivating potential in his/her job, general

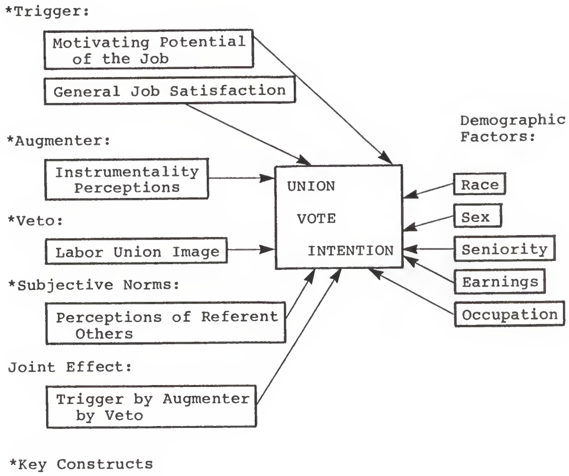


Figure 2. Model of Union Voting Intentions as proposed by Youngblood, DeNisi, Molleston, and Mobley (1984).

job dissatisfaction, and high perceived union instrumentality, because referent others (e.g., co-workers, supervisors, family members) intend to vote against the union. Also, subjective norms could have the opposite effect (an employee may intend to vote for the union, despite a high motivating potential, general job satisfaction, and low perceived union instrumentality, because referent others intend to vote for the union).

Although the authors included such personal characteristics as race, sex, seniority, earnings, and occupation in their model, they did so only because previous researchers suggested that such individual differences may affect the unionization process (Farber & Saks, 1980; Kochan, 1979). Youngblood et al. hypothesized that their model would operate similarly regardless of these demographic factors, and that such demographic factors would only account for variations in the levels of key model variables.

Youngblood et al. (1984) tested their union voting model with southern workers from right-to-work states. According to the authors, their "sample consisted of members of a consumer panel who are regularly surveyed for their views on a number of topics" (Youngblood et al., 1984, p. 580). Thus, the sample was not composed of potential bargaining unit members nor were any of the respondents union members. The researchers also removed all lawyers, doctors, engineers, and managers from their sample, reasoning that these occupational groups should be eliminated from the sample "because of the lack of opportunity to organize" (Youngblood et al., 1984, p. 581). Although the model was generally supported, one must question the validity of their model and results for several reasons.

First, the model which was tested involved only direct effects of the variables upon voting intention. However, the authors hypothesized that subjective norms moderate voting intention and that demographic factors have only indirect effects upon intention (neither of these critical hypotheses were actually tested). Second, the sample employed raises serious concerns about representativeness and generalizability of results. Finally, the Youngblood et al (1984) voting intention model is not really a model, but rather a conglomeration of attitudinal variables and demographic factors that do not represent an accurate portrayal of the unionization literature because only direct effects are suggested by the model.

Zalesny (1985) proposed a "revised unionization process model" based on her investigation of economic and noneconomic variables which were examined by previous researchers (see Figure 3). Using Triandis' (1976) attitude-behavior model and Gamson's (1968) model of political behavior, Zalesny hypothesized that noneconomic factors would be a stronger predictor of union vote preference; that perceived union instrumentality would best predict union vote preference; and that integrated models of human behavior

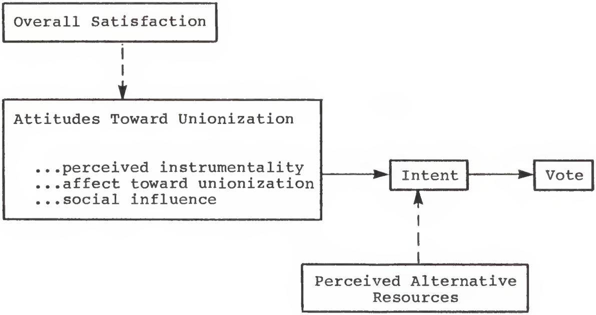

Overall Satisfaction
Attitudes Toward Unionization
...perceived instrumentality
...affect toward unionization
...social influence
Intent
Vote
Perceived Alternative Resources

Figure 3. Revised Model of the Unionization Process as proposed by Zalesny (1985).

would be better than individual variables in predicting vote preference (Zalesny, 1985, p. 246).

The Triandis (1976) attitude-behavior model postulates that behavior is a function of habit, intention to perform the behavior, psychological arousal, and facilitating conditions that are or are not present in a situation. As a general model of attitudes and behavior, Triandis' (1976) model has been applied to various behaviors including union voting preference (Terborg, Swenson, & Falkenberg, 1982).

Gamson's noneconomic model of political behavior proposes that political behavior can be explained by the relationship between authorities, who are the decision makers, and partisans, who are affected by the decisions made (Gamson, 1968, p. 18). The relationship between authorities and partisans is governed by perceived trust, power, and political efficacy. Partisans (employees) will attempt to influence authorities' (organizational administrators) decisions if they believe their interests are not being protected (low trust) and if they believe they possess the power and political efficacy to do so. Gamson's (1968) model has been employed in numerous investigations including union elections (Hammer & Berman, 1981).

Utilizing a longitudinal field study design Zalesny (1985) surveyed 455 midwestern higher education faculty both before and after a union representation election. Based on stepwise regression results, the author concluded that noneconomic variables were better predictors of voting preference than were economic variables. Further, she found that perceived union instrumentality (perceived union representation consequences and perceived union efficacy) is important in understanding and predicting union voting behavior and that the Triandis attitude-behavior model is a better predictor of union voting preference than is the Gamson political behavior model. However, as discussed in Chapter III, Zalesny's conclusions should be interpreted with caution since the use of ordinary least squares (OLS) regression may be an inappropriate statistical method when the dependent variable (voting preference) is a dichotomy.

The causal sequence proposed in several models of the unionization process (that perceived union instrumentality leads to intent, which leads to vote) were modified by Zalesny (1985) to reflect her empirical results. Zalesny's findings suggest that a clearer distinction needs to be made between instrumentality and attitude. Overall satisfaction and perceived alternative resources (e.g., the probability of finding a comparable job elsewhere) made significant independent contributions to the prediction of vote preference, necessitating the incorporation of these variables into her unionization process model.

Although Zalesny's (1985) model was generally supported, no mention was made as to whose (or which) unionization process model she tested or whose (or which) model she revised. Zalesny discusses several unionization process models (DeCotiis & LeLouarn, 1981; Youngblood et al., 1984) and that a modification is needed (Zalesny, 1985, p. 254). However, nowhere in the article does Zalesny indicate whose model she proposes revising, what exactly in this unknown model she wants to revise, nor where this revision is to occur in the causal linkages of the unknown model other than prior to voting intention. (A telephone conversation between this researcher and M. Zalesny, September 24, 1985, did not resolve these issues; despite extensive probing by this researcher.) Also, while Zalesny's findings suggest that perceived alternative resources may strongly affect the unionization process, the results of a single investigation are not sufficient to conclude that this is a critical variable in the unionization process. Finally, the Zalesny (1985) unionization model is vague and does not propose specific causal linkages between individual variables, perceptions, and behaviors as they apply to the unionization process; the model can also hardly be viewed as a true process model.

Based on a review of the unionization literature, DeCotiis and LeLouarn (1981) developed an integrative unionization process model composed of personal characteristic variables, work context variables, attitude toward unions, union instrumentality, voting intention, and actual voting behavior. The DeCotiis and LeLouarn model suggests that work context variables and personal characteristics lead to an individual's perceptions of the organizing union's instrumentality. Further, that union instrumentality leads to an attitude toward unions, then intent to vote, and finally to actual voting behavior (see Figure 4). Using their review of the literature as a basis, DeCotiis and LeLouarn operationalized work context as extrinsic job satisfaction (e.g., wages, approval from others), leadership style of the immediate supervisor, general working conditions, and perceived individual influence over valued outcomes (DeCotiis & LeLouarn, 1981, p. 103). Union attitudes were conceived as of a general attitude toward unions and as the instrumentality of a union in obtaining valued work-related outcomes. Personal characteristics, such as sex, race, tenure, and prior voting behavior, were treated as separate predictor variables. Thus, DeCotiis and LeLouarn (1981) proposed that if an employee's attitude toward unions is positive, he/she will intend to vote for the union, and then actually vote prounion in a union representation election. Also, the authors suggested that the closer in time the behavioral intent was to the actual performance of the behavior, the greater the consistency would be between attitude, intention, and behavior.

DeCotiis and LeLouarn (1981) partially field-tested their unionization process model with a small sample of white, female, private sector registered nurses after a union representation election occurred. Although their results generally supported the model and indicated that the largest single correlate of both voting intention and actual

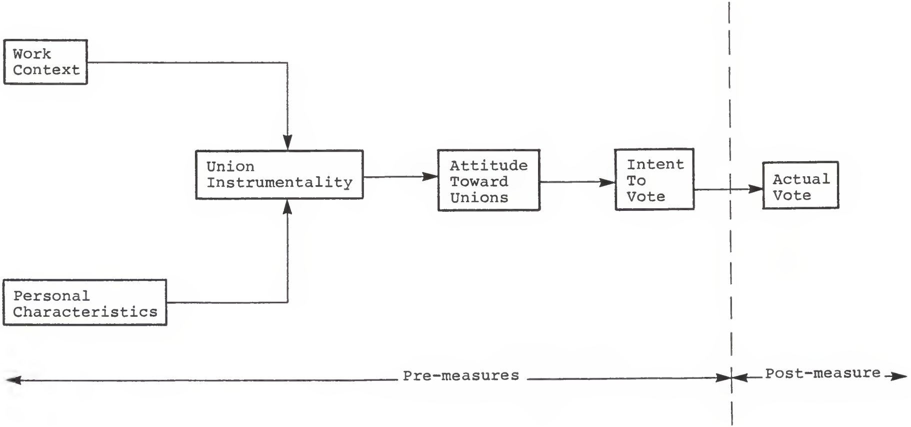


Figure 4. The Determinants of the Unionization Process as proposed by DeCotiis and LeLouarn (1981).

voting behavior was union instrumentality, there are a number of problems with their research.

The researchers did not employ a pre- and post-test field design. To adequately test an intent-causes-behavior model, a longitudinal field study seems necessary and desirable. Also, while DeCotiis and LeLouarn (1981) suggested causal linkages among their unionization process variables, the causal sequence of their model was not tested, nor were possible rival causal sequences or models. Finally, the authors included attitude toward unions in their theoretical model. However, they did not measure or empirically examine the effects of this variable. Thus, the DeCotiis and LeLouarn unionization process model was not adequately tested.

Although the DeCotiis and LeLouarn (1981) unionization process model is not perfect, of the four models that currently exist, this model appears to be the one best supported by the literature. Further, the DeCotiis and LeLouarn model is the most clearly articulated of the four models and suggests what appears to be the most plausible causal ordering of the major process variables that have been researched to date. However, as discussed below, the DeCotiis and LeLouarn model has major theoretical shortcomings. Consequently, the present study tests a slight modification which appears to be more theoretically sound. The present study also conducts a more complete test of both models. Respondents were surveyed before a union representation election about their personal characteristics, work context attitudes, attitude toward unions, union instrumentality, and voting intention. Then, after the election, the respondents were surveyed again about their actual voting behavior. Consequently, as discussed in Chapter III, the present research employed a pre- and post-test field design to more adequately test the intent-causes-behavior sequence.

The DeCotiis and LeLouarn (1981) model suggests that union instrumentality (a specific union attitude) leads to attitude toward unions (a general union attitude). However, the accumulated empirical evidence strongly suggests the opposite causal sequence--that attitude toward unions leads to union instrumentality (Brief & Rude, 1981; Ajzen & Fishbein, 1977; Farber & Saks, 1980; Getman et al., 1976; Schriesheim, 1978; Zalesny, 1985). In order to evaluate this difference in causal ordering, the present study tested the causal sequence as proposed by DeCotiis and LeLouarn (see Figure 4) and also tested attitude toward unions as causally prior to union instrumentality (see Figure 5). In addition, DeCotiis and LeLouarn (1981) proposed that personal characteristics and work context have direct effects on union instrumentality but not on attitude toward unions. However, the present study proposes that personal characteristics and work context affect attitude toward unions and also that personal characteristics and work context, along with attitude toward unions, affect union instrumentality.

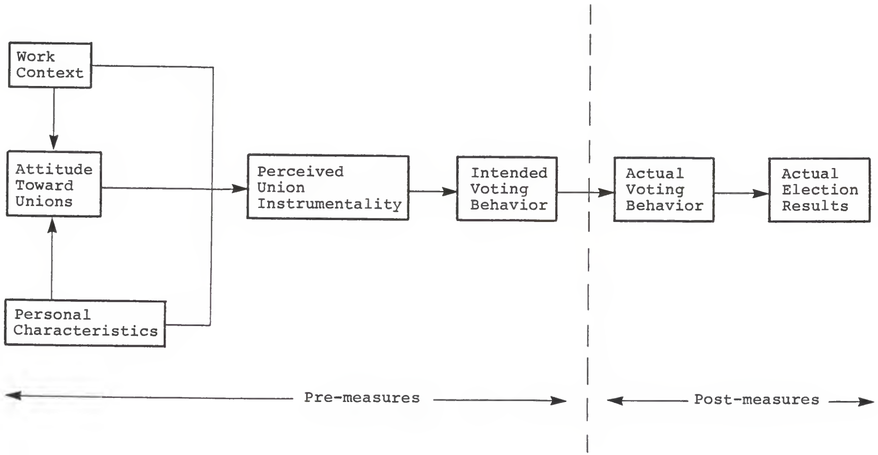
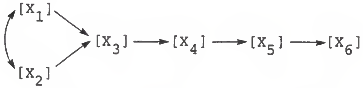


Figure 5. Proposed Alternative Causal Ordering of the DeCotiis and LeLouarn (1981) Unionization Process Model.

Testing the DeCotiis and LeLouarn model versus the present study's alternative causal ordering gives an inherent biased advantage to the latter, since it specifies more relationships and, as such, is more likely to reproduce the original correlation matrix better (Heise, 1969). Consequently, the present study also evaluated plausible rival causal models of the unionization process model to control for any inherent biases. These are summarized in Figure 6, and treated in more detail in Chapter III.

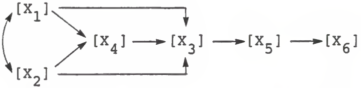
Summary

Unionization as a process with multiple determinants has led unionism researchers to increasingly include individual attitudinal, perceptual, and behavioral variables in their investigations. Empirical evidence suggests that of the personal characteristic variables reviewed, only race and pay dissatisfaction appear to clearly affect the unionization process. And, of the work context variables examined, employee job satisfaction and trust in the employing organization's administration also seem important. Attitude toward unions and union instrumentality are strongly associated with prounion responses and appear to be powerful determinants of individual voting intention and voting behavior. Finally, voting intention and behavior are highly intercorrelated and appear to be significantly affected by individual attitudes and perceptions. Consequently, the inclusion of selected personal characteristics, Model A*: DeCotiis & LeLouarn Model:



Model A. predicts X_3 as causally prior to X_4 and predicts no direct effects of X_1 and X_2 on X_4.

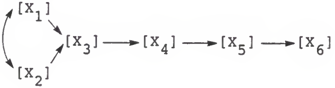
Model B*: Proposed Alternative Model:



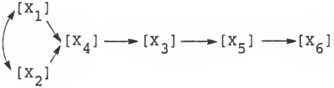
Model B. predicts X_4 as causally prior to X_3 and predicts direct effects of X_1 and X_2 on X_4 and on X_3.

This results in 4 rival causal models worth testing:

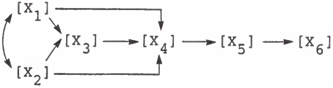
Model A_1*:



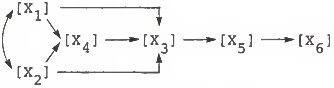
Model B_1*:



Model A_2*:



Model B_2*:



* X_1 = Work Context. X_2 = Personal Characteristics. X_3 = Union Instrumentality. X_4 = Attitude Toward Unions. X_5 = Voting Intention. X_6 = Voting Behavior.

Figure 6. Plausible Rival Causal Models of the Unionization Process Model.

work context variables, attitudes toward unions, and union instrumentality perceptions in a process model of union representation election voting intention and/or behavior seems warranted.

Four literature-based unionization process models were reviewed (Brief & Rude, 1981; DeCotiis & LeLouarn, 1981; Youngblood et al., 1984; Zalesny, 1985), of which the DeCotiis and LeLouarn model best represents the empirical literature. The present study tested this model and also an alternative causal ordering which better reflects theory and recent empirical findings. The next chapter briefly continues the theoretical discussion begun in this chapter, presents the hypotheses and models tested, and outlines the methodology employed. Chapter IV presents the results of the statistical analyses, while Chapter V presents the conclusions of the present study and discusses possible future unionization process research directions.

CHAPTER III

HYPOTHESES, MODELS, AND METHODOLOGY

Chapter Overview

As discussed in the previous chapter, the process of unionization has been investigated using multiple attitudinal, perceptual, and behavioral independent variables. Chapter II's literature review clearly suggests that personal characteristic variables, work context attitudinal variables, attitude toward unions, union instrumentality, and voting intention are significantly associated with individual voting behavior in union representation elections. In addition, four literature-based unionization process models were reviewed which incorporated some or all of the above-mentioned variables. As explained earlier, the present study tested one of these four models, the DeCotiis and LeLouarn (1981) model, and also tested an alternative causal ordering of this model to better reflect theory and recent empirical findings.

Chapter III presents the hypotheses that were tested in the present research and discusses the specific operationalizations used for each of the variables examined. The specific models tested in the present investigation are then presented below, as well as some plausible rival models that were examined. The discussion then turns to the methodology that was employed. Specifically, the research design, the research setting, sample characteristics, data collection procedures, measuring instruments, and the statistical analyses that were used in the present study are discussed.

Statement of Hypotheses

The primary purpose of the present investigation was to explore factors associated with higher education faculty voting behavior in a union representation election. Based on the review of the literature presented in Chapter II, a pattern of relationships between prounion attitudes and behaviors and personal characteristics, work context attitudes, attitudes toward unions, and union instrumentality appears to exist. Thus, the present research tested the following hypotheses derived from the literature (Chapter II):

1. Individual personal characteristics (particularly race, organizational tenure, pay level, number of dependents, and signing a union authorization card) will be significantly related to:
    a. Attitude toward unions.
    b. Perceived union instrumentality.
    c. Intended voting behavior.
    d. Reported voting behavior.
2. Work context attitudes (particularly trust in the employing organization's administration, economic

job satisfaction, and noneconomic job satisfaction) will be significantly related to:

    a. Attitude toward unions.
    b. Perceived union instrumentality.
    c. Intended voting behavior.
    d. Reported voting behavior.

3. Attitude toward unions will be significantly associated with:
    a. Perceived union instrumentality.
    b. Intended voting behavior.
    c. Reported voting behavior.
4. Perceived union instrumentality will be significantly associated with:
    a. Intended voting behavior.
    b. Reported voting behavior.
5. Intended voting behavior will be significantly related to reported voting behavior.
6. Reported voting behavior will be significantly related to actual election results.
7. Perceived union instrumentality will be most strongly predicted by attitude toward unions, followed by work context variables, and then personal characteristics.
8. Intended voting behavior will be most strongly predicted by perceived union instrumentality, followed by attitude toward unions, work context

variables, and personal characteristics, in that order.

9. Reported voting behavior will be most strongly predicted by intended voting behavior, followed by perceived union instrumentality, attitude toward unions, work context variables, and personal characteristics, in that order.

The first hypothesis proposes that personal characteristics will be significantly associated with each of the unionization process model variables, except for the work context variables (see Figure 5). Based on the review of the literature in Chapter II, an individual's sex, race, marital status, number of dependents, age, number of years in the current occupation, organizational tenure, highest educational level obtained, pay level, signing of a union authorization card, and teaching area compose the personal characteristics variables. Although the effects of sex, marital status, age, number of years in current occupation, educational level, and teaching area are not supported by the literature, these variables are frequently examined by unionism researchers. Excluding these variables from the present investigation would prejudge their possible effects and, as such, is unwarranted. Thus, they were included. It should be noted, however, that race (0 = nonwhite; 1 = white) and pay level were expected to be significant correlates, as they have had consistent significant negative effects on prounion responses in the literature. The same is true for the number of dependents of respondents, although the literature shows a consistent significant positive effect. Finally, signing a union authorization card was expected to be one of the significant positive correlates of prounion responses because of the strong significant positive associations found by Getman et al. (1976).

The second hypothesis proposes that work context attitudes will be significantly related to each of the union process variables, except for the personal characteristics variables (see Figure 5). Based on the literature review presented in Chapter II, trust in the employing organization's administration, organizational commitment, job-related psychological stress, economic and noneconomic job satisfaction, and psychological mobility should show these significant investigations. Organizational commitment has had mixed effects in previous empirical investigations. However, it was included in the current study on an exploratory basis. Both job-related psychological stress and psychological mobility were examined herein since previous research tentatively suggests significant relationships between these variables and prounion responses. Finally, trust in the employing organization's administration and economic and noneconomic job satisfaction were included because of their consistent significant negative relationship with prounion outcomes in previous research.

Hypotheses 3, 4, and 5 propose that attitude toward unions, perceived union instrumentality, and intended voting behavior, respectively, will be significantly associated with each other and with reported voting behavior in a union representation election. These variables were examined in the present study because of their significant relationships with each other and with union representation election voting behavior in previous empirical studies. The operationalization of each of these variables is described below in the methodology section.

Hypothesis 6 suggests that reported voting behavior will be closely related to actual election results. That is, how individuals report they voted in a union representation election will be closely associated with certified election results--whether the union won or lost the election. This hypothesis is supported by previous research, which reports a close correspondence in many studies.

Finally, Hypotheses 7, 8, and 9 propose that perceived union instrumentality, intended voting behavior, and reported voting behavior, respectively, will each be predicted by preceding union process model variables, with the most proximal being the most predictive (see Figure 5). These hypotheses are supported by previous theory and research, which suggest these a priori causal sequences.

Unionization Process Models Tested

As previously discussed, the DeCotiis and LeLouarn (1981) unionization process model suggests that work context variables and personal characteristics lead to union instrumentality, then to attitude toward unions, then voting intention, and finally to actual voting behavior (see Figure 4). Although this unionization process model is tested in the present study, accumulated evidence strongly suggests an alternative causal ordering (see the earlier discussion in Chapter II). That is, that attitude toward unions (a general attitude) leads to union instrumentality (a specific attitude), not vice versa. In addition, previous empirical evidence suggests that work context variables and personal characteristics affect attitude toward unions (Allen & Keaveny, 1981; Bigoness, 1978; Bigoness & Tosi, 1984; Feuille & Blandin, 1974; Getman et al., 1976; Kochan, 1979; Lawler & Walker, 1980; Martin, 1985; Maxey & Mohrman, 1980; Ponak & Janz, 1984; Schriesheim, 1978; Smith & Hopkins, 1979; Zalesny, 1985). Consequently, the present study tested the alternative unionization process model suggested by these relationships--(a) that work context and personal characteristics affect attitude toward unions, (b) that personal characteristics and work context, along with attitude toward unions, affect perceived union instrumentality, and (c) that attitude toward unions leads to union instrumentality, then to voting intention, then actual voting behavior, and finally to actual election results (see Figure 5).

Figure 6 persents a schematic diagram of the DeCotiis and LeLouarn (1981) unionization process model and the present study's alternative causal ordering. Testing the causal orderings discussed above gives an inherent (biased) advantage to the present study's alternative causal sequence, since it specifies more relationships. In other words, as shown in Figure 6, the DeCotiis and LeLouarn model proposes five relationships (Model A_1: work context with union instrumentality; personal characteristics with union instrumentality; union instrumentality with attitude toward unions; attitude toward unions with voting intention; voting intention with actual voting behavior). However, the present investigation's alternative causal ordering suggests seven relationships (Model B_2: work context with attitude toward unions; work context with union instrumentality; personal characteristics with attitude toward unions; personal characteristics with union instrumentality; attitude toward unions with union instrumentality; union instrumentality with voting intention; voting intention with actual voting behavior). Each of these unionization process models can be assessed by how close its implied correlation matrix is to the actual matrix. The model which best reproduces the actual correlation matrix is considered the model with the most plausible causal ordering (Heise, 1969). However, the model which specifies more variable relationships will be more likely to reproduce the actual correlation matrix and, as such, will appear more causally plausible. In order to overcome these model comparison complications, the testing of alternative plausible rival causal models appears warranted.

Heise (1969) stressed that when there is a question regarding the causal sequence among a set of variables, specifying alternative causal models allows a comparison of the relative credibility of each. Also, in the absence of an "undebatable" causal ordering, the evaluation of these rival causal models may prove insightful (see Heise, 1969; and Jermier & Schriesheim, 1978, for a discussion about the importance of this issue). Thus, it is the researcher's responsibility to evaluate alternative plausible causal models and determine whether or not they are supported (Kerlinger, 1973). However, in a causal inquiry, one cannot rule out all possible model alternatives. As pointed out by Cole (1974), the researcher should apply the principle of "sufficient reasonableness" and evaluate only a finite number of alternative models which are theoretically defensible. Given the differences outlined above and the fact that the present study used cross-sectional data that were based upon respondent perceptions and attitudes, cause-effect directionality among variables may be oversimplified if only two models are evaluated. Consequently, in order to avoid these interpretational problems, and to provide an exploratory test of the unionization process, the present research evaluated four plausible rival causal models (see Figure 6). Model A_1 is the DeCotiis and LeLouarn (1981) model, and Model B_2 is the present investigation's alternative causal ordering. Model A_2 depicts the DeCotiis and LeLouarn model, however, it also assesses the direct effects of work context and personal characteristics on attitude toward unions. And, Model B_1 depicts the present study's alternative causal model, but without specifying a direct effect of work context and personal characteristics on union instrumentality. In other words, Models A_1 and B_1 examine 5 variable relationships and Models A_2 and B_2 examine 7 variable relationships. And, Models A_1 and A_2 predict union instrumentality as causally prior to attitude toward unions and Models B_1 and B_2 predict attitude toward unions as causally prior to union instrumentality. Consequently, both the DeCotiis and LeLouarn (1981) unionization process model and the present study's alternative causal ordering are evaluated in such a manner as to lessen any inherent biased advantages to one model over the other.

As mentioned above, the present study used cross-sectional data and examined respondent perceptions and attitudes. Below is a detailed discussion of the methodology that was employed in this study's assessment of the unionization process.

Methodology

Research Design

The research design employed in the present investigation was a longitudinal field study that utilized the exploratory and hypothesis-testing approaches described by Katz (1953) and others (Campbell & Stanley, 1966; Cook & Campbell, 1979; Kerlinger, 1973; Stone, 1978). That is, the research design was longitudinal since respondents were surveyed both before and after a union representation election and was a field study since it surveyed an actual occurring union representation election as contrasted with one created solely for research purposes (e.g., a mock election created in a laboratory setting). Field studies are also characterized, as is the present study, in the following ways: (1) the research is ex post facto, i.e., no independent variables are manipulated by the researcher; (2) variables are systematically measured; (3) there is a minimization of researcher intrusion upon the respondents/organization being studied; and (4) the research focus may be descriptive, exploratory, and/or hypothesis-testing (Bouchard, 1976; Katz, 1953; Kerlinger, 1973; Runkel & McGrath, 1972; Scott, 1965; Stone, 1978). The present research did not manipulate any independent variables but surveyed respondent attitudes, perceptions, and behaviors. And, as explained below, the unionization process variables were systematically measured with a minimum of intrusion, involving two separate mail questionnaires. Finally, the present investigation used both exploratory and hypothesis-testing approaches.

Katz (1953) divided field studies into two broad types: exploratory and hypothesis-testing. Exploratory studies attempt to determine variable relationships that actually exist rather than predict relationships that might be found. Thus, exploratory studies have three purposes: (1) to discover significant variables in a naturally occurring environment; (2) to discover relationships among variables; and (3) to establish the groundwork for later, more systematic and rigorous, hypothesis-testing. Hypothesis-testing, on the other hand, involves the assessment of a conjectural statement about the relationship between two or more variables. Thus, the present study attempts to discover which unionization process variables are significantly related to union representation election voting, and to assess relationships among these variables. In addition, the present investigation tests the nine hypotheses outlined above, in order to examine specific relationships which have been postulated as explaining higher education faculty union voting behavior.

As with any research strategy, there are advantages and disadvantages to the approach. Although field studies suffer from possible unknown sampling biases, limited researcher control, and tenuous causal inferences (see Bouchard, 1976; Campbell & Stanlely, 1966; Cook & Campbell, 1979; Kerlinger, 1973; Scott, 1978; and Stone, 1978, for reviews of field study limitations), the field study strategy has a number of advantages, all of which provide the rationale for selecting this research design for the present study. Field studies are low in researcher intrusiveness, high in realism (since they are conducted in naturally occurring settings), are amenable to socially significant (e.g., applications-oriented) and sensitive (e.g., voting behavior) issues, may reveal valuable heuristic qualities, and dependent and independent variable relationships are often stronger than would be found in an artificial environment.

Dependent variables. The final dependent variable of interest in the present study is actual voting behavior by higher education faculty in a union representation election. However, since a longitudinal field study design was employed, the present research also considered other dependent variables. As shown in Figure 5, the pre-measure (before the union representation election) assessed work context variables, personal characteristics, attitude toward unions, union instrumentality perceptions, and voting intention. Consequently, the pre-measure dependent variables examined included: (1) attitude toward unions; (2) perceived union instrumentality; and (3) voting intention. As also indicted in Figure 5, the post-measure (after the union representation election) assessed actual voting behavior. Thus, the final dependent variable was actual voting behavior.

Independent variables. Given the nature of the present inquiry, different independent variables were considered, depending upon the dependent variable under examination. That is, when attitude toward unions was the dependent variable of interest, work context and personal characteristics were the independent variables; when perceived union instrumentality was the dependent variable, work context, personal characteristics, and attitude toward unions were the independent variables examined; when voting intention was the dependent variable, work context, personal characteristics, attitude toward unions, and perceived union instrumentality were the independent variables of interest; and finally, when actual voting behavior was the dependent variable, work context, personal characteristics, attitude toward unions, perceived union instrumentality, and voting intention were the independent variables considered.

Research Setting

The present study was conducted at a public two-year community college in a medium-sized community (approximately 100,000 residents) in the southeastern part of the United States. Student enrollment was approximately 23,000 students. The community college was one of over 90 similar state-funded two-year colleges, many of whose faculty were represented by unions. In addition, the institution was located in the same community as a large state university that was organized by a major labor organization.

As a public institution it was covered by a comprehensive state public sector employees labor relations act. This act was tailored after the NLRA and follows similar union representation case and election procedures (see Chapter I). All state union representation case procedures, including elections, are overseen by a state Public Employee Relations Commission (PERC).

Seven years before the current election, another union representation election was held at the same institution, resulting in the defeat of the organizing union [63 percent of those who voted (116/184) indicated no agent]. This previous election was held before extensive public sector unionism had occurred in the state (as of 1984, 52 percent of the state's public sector employees were covered by a collective bargaining agreement).

The current drive to unionize this community college began two years before the present union representation election was held. Local union representatives from the near-by state university assisted some of the community college's faculty to form a steering committee that promoted the union organization drive. Prounion supporters sought to increase faculty participation in the institution's decision-making policies (e.g., course loads, promotion and tenure) and to establish effective lobbying at the state legislative level. The main theme of the union organizational drive was to increase faculty input ("voice") at the state and local decision-making levels.

Sample

The population sampled in the present study included all full-time faculty members from the institution's two schools or divisions (vocational, and arts and sciences) who were eligible to vote in the union representation election. There were 225 eligible faculty members. As discussed below, the respondents were surveyed with questionnaires, to which 91 faculty members responded--a 40 percent response rate. Of the 91 returned questionnaires, 96 percent returned both the pre-measure and the post-measure, resulting in a final sample of 87 faculty members. The voting pattern reported in the research sample strongly corresponds to the actual voting pattern. The actual election results involved 63 percent voting against the union, 34 percent voting for the union, and 3 percent not voting. Among the respondents, 60 percent reported voting against the union, 33 percent as voting for the union, and 7 percent as not voting. The response rate for the two divisions were 38 percent (37/97) Vocational and 28 percent (36/128) Arts and Sciences; 14 respondents (16 percent) did not indicate their affiliation. The sample represented the institution's faculty with respect to the percentage of both sexes and arts and professional teaching areas. However, the sample appears to slightly under-represent the sciences teaching area (9 percent versus 15 percent). Descriptive statistics for the sample are presented in Chapter IV.

Procedure

Nine days before the scheduled election date, an individually addressed letter was mailed to each respondent's on-campus address (see Appendix A). The letter informed the person that a survey dealing with their forthcoming union representation election would shortly arrive in the mail. The letter further stated that the study was not supported, endorsed or funded by any employee, employee group, union, or the college. It also indicated that the survey was part of the researcher's dissertation and that the questionnaire would take approximately a half-hour to complete. Finally, this pre-letter stated that responses would be confidential and that the findings of the study would be made available to all faculty members in summary report form.

Approximately two days after the above pre-letter was mailed, the researcher received a number of telephone calls from the community college faculty expressing concern over the impending survey. Consequently, another pre-letter was mailed to each respondent to dispel any further faculty concerns (see Appendix B). This second letter restated the purpose of the survey, the fact the study was independent of both the college's administration and the organizing union, and that all responses would remain completely confidential.

Seven days before the scheduled election, the pre-measure questionnaire was individually addressed and mailed to each respondent's on-campus address (see Appendix C). In order to facilitate the questionnaire's return, a stamped envelope, preaddressed to the researcher at her institution, accompanied the questionnaire. In addition, this mailing included a preaddressed stamped postcard which the respondent could mail at a later time to request summary results of the survey.

As shown in Appendix C, the pre-measure questionnaire contained a cover letter explaining the purpose of the study, that the survey was independent and not endorsed by any constituent, and that all responses would remain completely confidential. The cover letter also stated that a second part to the questionnaire (the post-measure) would be mailed after the union representation election and that the two questionnaires (the pre- and post-measures) would need to be combined for subsequent analysis. In order to facilitate the combining of the two questionnaires, and to assure respondent anonymity, each subject was asked to mark the pre-measure survey instrument with some four-digit number and some alphabetical letter. That is:

> "In order to match the questionnaires and not identify you we ask you to do one of two things: (1) write the last four digits (numbers) of your home telephone number and some letter (e.g., A, Z, E, etc) in the upper right hand corner on the first page of this questionnaire; (2) write some random four-digit number and some letter in the upper right hand corner of the front page of this questionnaire."

The respondents were also instructed to record and save their identifying code on two enclosed plain white stickers (for later use on the post-measure questionnaire).

The day of the union representation election the post-questionnaire was individually addressed and mailed to each respondent's on-campus address (see Appendix D). This questionnaire also included a cover letter reaffirming respondent anonymity and asking the respondent to affix one of the identifying code stickers that they had marked and saved. As in the previous questionnaire's mailing, a preaddressed stamped envelope was provided for the survey's return.

Measures

The pre-measure questionnaire contained measures of personal characteristics, work context variables, attitude toward unions, union instrumentality, and voting intention (see Appendix C). The post-measure questionnaire contained measures of actual voting behavior (see Appendix D).

Personal characteristics. Sex, race, marital status, the number of dependents, age (in nine 5-year blocks starting with < 25 years and ending with ≥ 60 years), the number of years in the current occupation and organizational tenure (both with eight response choices starting with < 6 months and ending with ≥ 20 years), and the highest educational level obtained (in nine categories with degree completions and intermediate or post degree categories; starting with a high school diploma and ending with a doctoral degree) were assessed in the survey. In addition, pay level (in nine categories starting with < $10,000 and ending with ≥ $38,000; with $4,000 intervals), signing of a union authorization card, and teaching area (collapsed into four distinct categories; arts, science, professional, and other) were variables measured.

Work context variables. Trust in the employing organization's administration was measured with a modification of the 3-item scale used by Hammer and Berman (1981). The modification consisted of personalizing the questions for the sample (adding the name of the community college surveyed) and of modifying the items for increased clarity. The respondents were asked "To what extent do you trust . . ." "the state Board of Regents" (item 1), "the (name) community college administration" (item 2), and "your department's administration" (item 3)? Seven-point scales were used, with response alternatives ranging from Completely Distrust (1) to Completely Trust (7). An additive composite of the 3 items was used to form a single measure of trust. Hammer and Berman (1981) found an acceptable coefficient alpha (.68) for their 3-item scale, and evidence suggestive of validity.

Organizational Commitment was assessed using the 15-item Porter, Steers, Mowday, and Boulian (1974) organizational commitment scale. This scale was slightly modified, by replacing the term "organization" with "college" and the term "employees" with "faculty" throughout the measure. A 5-point response scale was used, with alternatives ranging from Strongly Disagree (1) to Strongly Agree (5). This organizational commitment scale has been widely used and generally has had highly acceptable coefficient alphas (e.g., .90; Angle & Perry, 1981; Porter, Crampon, & Smith, 1976). Extensive data also exist which support the validity of this scale (e.g., Porter et al., 1974).

Job-related psychological stress was measured using Spielberger's (Spielberger, Gorsuch, & Lushene, 1970) 20-item State Anxiety subscale of the State-Trait Anxiety Inventory. Spielberger postulates that state anxiety "may be conceptualized as consisting of unpleasant, consciously-perceived feelings of tension and apprehension" (Spielberger, 1972, p. 29). A short sentence was added to the instructions, as suggested by Spielberger (1972) and used by Schriesherim and Murphy (1976), requesting that respondents complete the subscale describing "how you usually feel on your present job." The standard 4-point response scale was used, with alternatives ranging from Not At All (1) to Very Much So (4). Considerable data pertaining to the validity and reliability of this instrument are presented by Spielberger and his associates (Gaudry, Vagg, & Spielberger, 1975; King, Heinrich, Stephenson, & Spielberger, 1976; Spielberger, 1972; Spielberger, Gorsuch, & Lushene, 1970).

Job satisfaction was measured by the Minnesota Satisfaction Questionnaire (MSQ: Weiss, Dawis, England, & Lofquist, 1967). This instrument was designed to measure satisfaction with 20 different job facets (5 questions per facet), and it has been subjected to many examinations, as well as being carefully developed and refined (Betz, Weiss, Dawis, England, & Lofquist, 1966; Dunham, Smith, & Blackburn, 1977; Gillet & Schwab, 1975; Weiss et al., 1967; Weiss, Dawis, Lofquist, & England, 1966). Following the research of Schriesheim (1978), eight satisfaction dimensions were selected for the current study: Four economic satisfactions (company policies and practices, compensation, security, and working conditions), and four noneconomic ones (achievement, creativity, independence, variety). The standard 5-point scales were used, ranging from Very Dissatisfied (1) to Very Satisfied (5). Many studies have shown these subscales to be highly reliable and valid (e.g., Dunham et al., 1977; Gillet & Schwab, 1975).

Each respondent's psychological mobility was measured by combining two scales developed by Kerr, House, and Wigdor (1971): a 3-item measure of ability to move, and a 6-item measure of willingness to move. These instruments were slightly modified in order to personalize the items (the term "organization" was replace with the name of the community college) and the standard four- and five-point verbal anchors were used as the response alternatives. These instruments were shown by their creators to have acceptable internal consistencies, and subsequent organizational researchers have had comparable favorable results (Kerr, 1973; House & Kerr, 1973; Schriesheim, Kinicki, & Schriesheim, 1979; Von Glinow, 1978).

Attitude toward unions. General attitude toward unions was assessed using the 20-item Uphoff and Dunnette (1956) measure of affective attitudes toward unions in general. The standard response choices used range from Strongly Agree (1) to Strongly Disagree (5). In reviewing the evidence pertaining to this measure, Robinson, Athanasiou, and Head note that the scale "sampling of item content, construction procedures, . . . reliabilities, and validation procedures all reflect a high level of methodological sophistication" (Robinson et al., 1969, p. 282). Uphoff and Dunette (1956) report a substantial amount of data pertaining to the reliability and validity of this scale and more recent studies (e.g., Bigoness & Tosi, 1984; Schriesheim, 1978) also support this scale's reliability and validity. A slight modification was made in the eleventh item of the scale; the word "man" was changed to "person," so that no sexual identification was inherent in that item.

Union instrumentality. Many studies of faculty unionism have stressed the importance of governance and voice (e.g., Allen & Keaveny, 1981; Hamner & Berman, 1981; Herman & Skinner, 1975; Kennelly & Peterson, 1974; Ponak & Thompson, 1979) and of professionalism concerns (e.g., Aussieker & Garbarino, 1973; Kennelly & Peterson, 1974; Ladd

& Lipset, 1973, 1975; Peterson, 1973; Ponak & Thompson, 1979) in the development of faculty interest in union representation. In addition, compensation, terms and conditions of employment, and job security issues have frequently been found to affect faculty attitudes toward unions (e.g., Allen & Keaveny, 1981; Bigoness, 1978; Dayal, 1982; Flango, 1975; Gomez-Mejia & Balkin, 1984; Herman & Skinner, 1975; Ladd & Lipset, 1973). Consequently, a 36-item scale of union instrumentality was developed to examine respondent's perceptions of the extent to which the union could affect these 5 theoretically-relevant areas: Governance and Voice (9 items); Compensation (3 items); Job Security (6 items); Professionalism (11 items); and Terms and Conditions of Employment (7 items).

Items measuring governance and voice, compensation, job security, and terms and conditions of employment were adapted from measures used by Bigoness and Tosi (1984) and Ponak and Thompson (1979). The professionalism items were based upon professional attitudes identified by Filley, House, and Kerr (1976) and from the measures used by Ponak and Thompson (1979). Using 7-point response categories, the respondents indicated the extent to which they felt union representation would Strongly Help (1) to Strongly Harm (7) them with respect to each item. A factor analysis of the scale did not support the use of separate subscales (see the discussion below), so that all 36 items were simply used to form a single measure of perceived union instrumentality.

Voting intention. Each respondent's voting intention was assessed by his or her response to, "I intend to vote in the following manner in the upcoming [community college's name] union representation election." Five response categories were provided: (1) Vote for the union; (2) I am not eligible to vote in the election; (3) I have not decided how I am going to vote; (4) I am not going to vote in the election; and (5) Vote against the union. The results indicated that 50 respondents (58 percent) intended to vote against the union, 31 respondents (36 percent) intended to vote for the union, and 4 respondents (5 percent) were undecided. (Two of the 87 subjects [2 percent] failed to answer this question.)

Actual voting behavior. Actual voting in the union representation election was measured by asking each respondent, "How did you vote in the representation election of [date of the election]?" Five answer categories were provided: (1) For the union; (2) Against the union; (3) I was eligible but did not vote; (4) I was not eligible to vote; and (5) I can't remember how I voted. As a partial check on the validity of answers to this question, as well as sample representativeness, the percentage of reported prounion votes (33) and reported antiunion votes (60) were matched against the known results of the election (34 percent for and 63 percent against union representation). Since there are virtually no differences between the percentages, it appears that the respondents accurately disclosed their voting behavior. In addition to the foregoing question, respondents were asked to what extent they regretted how they had voted. All of the respondents (100 percent) indicated that they had no regret at all.

Method of Analysis

To assess the generalizability of this study's findings to other higher education faculty, a comparison sample was surveyed (see Appendix E). The comparison sample consisted of 671 full-time summer teaching/research university faculty who were employed by a major university that was located in the same city as the community college surveyed in this study. Student enrollment was approximately 35,000 students. The university was one of 9 similar state-funded four-year plus universities, where the faculty have been represented by a major labor organization since 1978. As in the case of the community college, this public state university was covered by a comprehensive state public sector employee labor relations act.

The comparison sample faculty were members of one of fourteen colleges/instructional areas within the university, which were grouped into three teaching areas: Arts (fine arts, journalism and communications, liberal arts and sciences); Sciences (agriculture, forest resources and conservation); and Professions (accounting, architecture, business administration, education, engineering, law, medicine, health related professions, physical education).

The response rates for the three teaching areas were 45 percent (261/577) Arts, 36 percent (172/475) Sciences, and 42 percent (227/536) Professions; 56 respondents (8 percent) did not indicate their affiliation. The sample represented the institution's faculty with respect to the percentage of both sexes. Descriptive statistics for the comparison sample are presented in Chapter IV.

As shown in Appendix E, the comparison sample was surveyed about the same demographic factors, their trust in the employing organization's administration, and union instrumentality perceptions. This survey was altered only to personalize items and to more accurately capture the comparison sample's educational, pay, and teaching area distributions. Specifically, the institution's name was changed to reflect the difference in employer; highest educational level obtained ranged from a Bachelor's Degree (1) to More than a Doctoral Degree (5); teaching area response choices were changed to reflect those areas existing within the university; pay level was increased by \$10,000 per category (from < \$20,000 to ≥ \$48,000); and trust in the employing organization's administration had an additional item that asked "To what extent do you trust your department's administration?". The response rate for the comparison sample was 44 percent (699/1588), of which 671 (96 percent of the surveys returned) were useable.

Descriptive statistics and reliability. Means, standard deviations, and reliability coefficients for the measures were computed for both samples and are reported (along with the rest of the results) in the next chapter. In order to assess sample differences (community college faculty versus university faculty), MANOVA (multiple analysis of variance) and independent sample t tests were performed. As discussed in Chapter IV, there were few sample differences; overall, the generalizability of this study's findings were supported.

Factor analysis. As noted above, a principal axis factor analysis was performed on the union instrumentality scale, to determine whether the items measuring the 5 theoretical categories (governance and voice, compensation, job security, professionalism, and terms and conditions of employment) could be used to form subscales. Since the respondent-to-item ratio was better with the comparison sample (671 respondents to 36 items), it was decided to perform the factor analysis with this sample, rather than with the community college sample. Using several methods of estimating communalities, from 2 to 6 factors were extracted (even though there were 5 theoretical categories in the union instrumentality scale). Then, both orthogonal (varimax) and oblique (quartimax) rotations were performed on the extracted factors. Despite the diversity of factor analytic solutions considered, a careful examination of each failed to indicate any clear, consistent pattern of relationships, with a general factor clearly apparent in each analysis. As a further test of these unidimentional union instrumentality results, the Haitovsky (1969) test of the item correlation matrix determinant was performed. The determinant for a correlation matrix of orthogonal variables is 1. However, the determinant of a singular matrix (multicollinear variables) is 0. Using a chi-square statistic with 630 degrees of freedom (36 x 35 / 2), it was determined that the union instrumentality inter-item correlation matrix was singular--measuring a single unidimentional factor. Thus, the obtained results did not support the existence of 5 factors, but rather a unidimentional perceptual view of union instrumentality. Consequently, as noted above, an additive composite of the 36 items was used to form a single measure of perceived union instrumentality.

Correlation analysis. Zero-order correlations were computed and tested for statistical significance, to determine the extent to which the independent and dependent variables were intercorrelated. In addition, in order to assess the postulated relationships in Hypothesis 1 through 5, correlations among the unionization process model variables were computed and tested for significance. As discussed in Chapter IV, there was a high degree of intercorrelation among the model variables.

Chi-square analysis. A chi-square analysis was performed to test for the statistical significance of Hypothesis 6. That is, whether or not reported voting behavior is significantly related to actual election results. As discussed in Chapter IV, reported voting behaviors closely corresponded to the actual voting behaviors.

Multiple regression analysis. Due to the predictors being intercorrelated, simultaneous multiple regression analysis was used to test Hypotheses 7 through 9. That is, all of the predictors were entered into the regression equation at the same time. This method of analysis allows for the examination of the change in R^2 for each predictor, while all the other predictors are statistically controlled (i.e., a multiple partial r). Consequently, the first prediction equation (Hypothesis 7) examined the effects of personal characteristics, work context attitudes, and attitudes toward unions on perceived union instrumentality. The second equation (Hypothesis 8) tested the effects of personal characteristics, work context attitudes, attitudes toward unions, and perceived union instrumentality on voting intention. And finally, the third equation (Hypothesis 9) assessed the effects of personal characteristics, work context attitudes, attitude toward unions, perceived union instrumentality, and voting intention on actual voting behavior.

Exploratory and path analysis. As noted above, there is no "undebatable" causal ordering of the unionization process and, as such, the present study examines four plausible rival causal models. In addition, the literature (see Chapter II) does not provide support for unequivocal or undebatable inclusion, or exclusion, of specific personal characteristic variables or of specific work context variables. Thus, the present investigation performed stepwise regression analysis to examine which independent variables should be included in subsequent path analyses. These stepwise-regressions used a .10 significance level for both inclusion in the regression and as the criterion for remaining. The obtained results of this analysis (as indicated in Chapter IV) were then used to select the personal characteristics and work context variables for the subsequent path analyses. The .10 significance level was used due to the exploratory nature of these analyses.

As discussed above, and as shown in Figure 6, four different causal models were examined. In order to assess these rival causal orderings, path analyses were performed. Path analysis decomposes zero-order correlations into direct and indirect effect components, helping in the identification of spurious bivariate relationships. It is statistically equivalent to ordinary least squares (OLS) regressions with standardized variables (the standardized regression weights constitute the path coefficients, and they are interpretable as the square root of variance attributable in one variable due to the causally prior independent variable). First, the four rival unionization process models were tested. The resulting path coefficients for each model were then examined for significance, and all nonsignificant and/or negligible paths (i.e., path coefficients of less than .20 after rounding; see Heise, 1969; and

Jermier & Schriesheim, 1978, for a discussion of negligible paths) were deleted and the remaining path coefficients re-estimated. This process (testing--deletion--re-estimation) continued until only paths that were both statistically significant and greater than .20 remained. Finally, each model's implied correlation matrix was calculated and, as discussed in the next chapter, these were compared with the actual correlation matrix, to determine the most plausible causal model.

Logistic regression. Voting intention and actual voting behavior each consisted of 5 response alternatives. However, only respondents who indicated prounion or anti-union voting sentiments were subsequently analyzed, since so few (8 percent) indicated indecision. Consequently, voting intention and actual voting behavior became dichotomous dependent variables. Although ordinary least squares (OLS) regression has been used in most of the previous studies that examined voting behavior (e.g., Hammer & Berman, 1981; Zalesny, 1985), several of the assumptions underlying OLS regression may be violated when the dependent variable of interest is dichotomous (Doyle, 1977; Green, Carmone, & Wachspress, 1977; Maddala, 1983; Press & Wilson, 1978). When the dependent variable is a dichotomy, the expected value of the model's error term is nonzero, the variance of the error term is heteroscedastic and, since the dependent variable is discrete, the error term cannot be normally distributed (Doyle, 1977). Consequently, using regression analysis in this instance may cause high unexplained variance, misleading estimates of the effects of the predictors, and an inability to make statements about the probability of given responses (Doyle, 1977; Green et al., 1977; Maddala, 1983). A variation of log-linear modeling, logistic regression, has been proposed to be a better statistical method when the dependent variable may not have a multivariate normal distribution (Goodman, 1972; Maddala, 1983; Press & Wilson, 1978). Although an attempt was made in the present study to assess Hypotheses 8 and 9 with the logistic regression procedure, repeated attempts at using this approach failed. While some statisticians (e.g., Goodman, 1972; Maddala, 1983; Press & Wilson, 1978) have indicated that a logistic regression can theoretically contain both categorical (or dichotomous) and continuous independent variables, operationally all the existing computer programs that were used on the data of this study required that the continuous predictors that were examined be transformed into categorical or dichotomous predictors. Despite this, however, the relatively small size of the sample in this study caused empty cells in some of the independent variable cross-classification tables, resulting in an inability to compute logistic regression parameters. This, plus the fact that transforming continuous variables into categorical or dichotomous ones can result in gross distortions of the data (see Nunnally, 1978, for a discussion of this) led to the decision not to use logistic regression analysis in the present investigation. Instead, discriminant analysis was used.

Discriminant analysis. Discriminant analysis is closely related to multiple regression (Kerlinger, 1973); its purpose is to discriminate (distinguish) groups from one another on the basis of a set of measures. A discriminant function is a regression equation with a dependent variable that represents group membership and, as such, the function specifies to which group each sample member belongs. Thus, the least-squares "best" composite score is calculated from the values obtained from a set of measures and the higher the squared canonical correlation (p^2) the better the prediction of group membership. In other words, when dealing with two groups (as in a union representation election), the discriminant function is similar to a multiple regression equation with a nominal dependent variable (coded 0 = against the union, 1 = for the union) representing group membership. Consequently, Hypotheses 8 and 9 were re-examined using discriminant analysis where the discriminating variables (the predictor set) was based on the stepwise regression results. That is, Hypothesis 8 was retested in order to distinguish those respondents who intended to vote prounion (coded 1) from those who intended to vote against the union (coded 0). And, Hypothesis 9 was retested in order to distinguish those respondents who reported voting for the union (coded 1) from those who reported voting against the union (coded 0).

Summary

The nine hypotheses that are tested in the present study were presented, as well as a recapitulation of the DeCotiis and LeLouarn (1981) unionization process model and the alternative causal model that is examined. The selection of personal characteristics variables (e.g., sex, race) and work context variables (e.g., trust in the employing organization's administration) is also discussed, as well as an explanation of each hypothesis.

In order to prevent biasing test results in favor of the present study's alternative causal ordering of the DeCotiis and LeLouarn (1981) model, four plausible rival causal orderings are examined. Since there is a question regarding the causal sequence among the unionization process variables, testing rival causal models allows a comparison of each.

The present research uses a longitudinal field study design which involves both explanatory and hypothesis-testing approaches. This study surveyed a public two-year community college faculty sample who are covered by a comprehensive state public sector employee relations act.

The higher education faculty sampled were surveyed before a union representation election (assessing all the model's variables except actual voting behavior) and after the representation election. A comparison higher education faculty sample was gathered to demonstrate generalizability of the community college faculty results.

Each of the variable measures was explained, and all of the work contest variables and attitude toward unions variables were assessed using standardized measures with demonstrated reliability and validity. The balance of the measures were created for the present study but were based on the results of previous research.

Multiple statistical techniques are utilized and an explanation of each was provided. In particular, factor analysis, correlation analysis, multiple regression analysis, stepwise regression analysis, path analysis, logistic regression analysis, and discriminant analysis. Chapter IV presents the results of these analyses, as well as the means, standard deviations, and reliabilities of the measures.

CHAPTER IV

RESULTS

Chapter Overview

This chapter presents the results of the present investigation. First, the descriptive statistics for the community college faculty sample and the university faculty sample, as well as the reliability coefficients for the measures (see Chapter III), are discussed. This is followed by the results of the two independent sample t-tests. Next is the presentation of the bivariate correlation analysis and the assessment of the postulated relationships in Hypotheses 1 through 5 (see Chapter III). In order to examine the statistical significance of Hypothesis 6, a chi-square analysis of reported voting behavior and the actual election results was performed; these results are presented next. Then, the postulated relationships in Hypotheses 7 through 9 (see Chapter III) are examined. As discussed in the previous chapter, simultaneous OLS multiple regression analysis was used to examine these hypotheses.

In order to examine the causal ordering of the four plausible unionization process models, stepwise regression analyses were performed to determine which independent variables should be included in the subsequent path analyses; these stepwise regressions are discussed. The results of the path analyses are presented, as well as the results of comparing each model's implied correlation matrix with the corresponding actual correlation matrix. The results of Haitovsky's (1969) test of the variable correlation matrices, assessing multicollinearity, are also presented.

Finally, Hypotheses 8 and 9 were re-examined by using discriminant analysis in order to evaluate the prediction equation's ability to discriminate between prounion and antiunion group membership. As discussed in the previous chapter, the variable predictor sets used to examine these hypotheses were based on the regression results.

Descriptive Statistics, Reliability Coefficients, and T-Test Results

Comparison of Personal Characteristics Variables

Means and standard deviations for personal characteristics variables for the community college faculty (N=86) and the university faculty (N=658) samples are presented in Table 5. As indicated in Table 5, one observation was deleted in the community college sample (87 - 1 = 86) and 13 observations were deleted in the university sample (671 - 13 = 658) due to missing data.

A nonstatistical comparison of the two samples' personal characteristics shows that the community college respondents and the university respondents do not differ

Table 5. Summary of Personal Characteristics for the Community College Faculty and University Faculty Samples.

	Community College (N=86)			University (N=658)		
Personal Characteristic	Mean	SD[a]	Interpretation	Mean	SD[a]	Interpretation
Sex[b]	.51	.50	both	.89	.31	male
Race[b]	.97	.19	white	.95	.22	white
Marital Status[b]	.58	.50	married	.85	.36	married
Number of Dependents	1.31	1.26	one	2.02	1.56	two
Age	4.55	1.82	46-50 years	4.47	2.06	46-50 years
Years with Institution[c]	5.41	1.39	7-10 years	5.39	2.02	7-10 years
Years in Teaching[c]	6.31	1.55	10-15 years	6.02	2.01	10-15 years
Years in Occupation	6.66	1.36	15-20 years	6.34	1.74	10-15 years
Tenure[b]	.86	.35	tenured	.73	.44	tenured
Full-time[b*]				.99	.12	full-time
Educational Level	6.28	1.27	graduate degree	7.72	.70	doctoral degree
Annual Pay	3.52	.89	$22-25,999	4.28	2.32	$32-35,999

Continued

Table 5. Continued.

	Community College (N=86)			University (N=658)		
Personal Characteristic	Mean	SD[a]	Interpretation	Mean	SD[a]	Interpretation

[a] SD = standard deviation.

[b] Dummy Coded: Sex: 0 = female, 1 = male. Race: 0 = nonwhite, 1 = white.
Marital Status: 0 = unmarried, 1 = married. Tenure: 0 = no, 1 = yes.
Full-time: 0 = no, 1 = yes.

[c] These items were assessed for the purpose of generalizability; they have not been previously discussed.

[*] All community college faculty eligible to vote in the union representation election were full-time faculty members.

with respect to the following variables (see the "Interpretation" columns of Table 5): race (white); marital status (married); age (46-50 years old); years employed at their present institution (7-10 years); years employed in the teaching profession (10-15 years); tenure status (tenured); or full-time versus part-time employment status (full-time). However, the two faculty samples appear to differ in five personal characteristics variables.

The community college sample was almost evenly half male and half female, while the university sample was 89 percent male. The community college respondents reported an average of one dependent, while the university reported an average of two dependents. Also, the community college respondents reported an average of 15-20 years in their current occupation, as contracted with an average of 10-15 years for the university sample. The community college sample also reported, on the average, to have a graduate degree, whereas the university sample reported a doctoral degree. This difference in educational level between the two faculty samples is not surprising, however, since education level requirements for employment differ between these two higher education institutions. Community colleges typically require a graduate degree and universities usually require a doctoral degree as the minimum education level for employment.

Finally, the two faculty samples differed in their average annual pay levels. The community college reported an average annual salary of $22,000 to $25,999, as compared with the university sample's reported average of $32,000 to $35,999. As with the educational differences between the samples, these pay level differences are not surprising. In fact, they are probably associated with the educational level differences between the two samples and with the prestige of the institutions involved.

Summary

Chapter V discusses implications of the above personal characteristic variable comparisons. However, the above results suggest that the two samples are not markedly different and that the community college faculty findings can probably be generalized with some confidence to university faculty. Of the 12 demographic factors reported (and examined) in Table 5, the two faculty samples reported the same average results on seven of them (58 percent agreement). Moreover, of the 5 personal characteristics where the samples differed, 2 of these (educational level and pay level) were not unexpected, due to the differences in the institutions themselves. Consequently, the two faculty samples only differed in three areas worth note--proportion of males, number of respondent dependents, and years in their current occupation.

Comparison of Unionization Process Variables

Table 6 reports the item means and standard deviations for signing a union authorization card, all work context variables, perceived union instrumentality, voting intention, and actual voting behavior. Also shown in Table 6 are the reliability coefficients for all the scaled variables.

The community college and university faculty samples were both asked about their trust in the employing organization's administration and about their perception of a union's instrumentality for them personally (see Chapter III). The means shown in Table 6 indicate that both faculty samples share similar average perceptions about trusting their institution's administration (trust somewhat) and about a union's instrumentality (neutral). [It should be noted that the response scale for perceived union instrumentality was coded so that a large score ($\geq$ 5) would indicate a more favorable union instrumentality perception.]

In addition to being asked about the above two work context variables, the community college faculty were also surveyed about their: signing a union authorization card ($\bar{X}$ = .45; 45 percent signed); organizational commitment ($\bar{X}$ = 3.63; slightly committed); job-related psychological stress ($\bar{X}$ = 1.69; somewhat stressed); general job satisfaction ($\bar{X}$ = 3.55; somewhat satisfied); economic job satisfaction ($\bar{X}$ = 3.27; close to neutral); noneconomic job satisfaction ($\bar{X}$ = 3.83; moderately satisfied); psychological

Table 6. Item Means and Standard Deviations, and Scale Reliabilities for the Community College Faculty and University Faculty Samples.

Variable	Number of Items	Community College (N=86)			University (N=658)		
		Mean	SD[a]	Reliability[b]	Mean	SD[a]	Reliability[b]
Signing Authorization Card[c]	1	.45	.50				
Trust in the Administration	3[d]	4.78	1.38	.84	4.61	1.23	.82
Organizational Commitment	15	3.63	.70	.91			
Job-related Stress	20	1.69	.51	.93			
General Job Satisfaction	40	3.55	.80	.98			
Economic Job Satisfaction	20	3.27	.76	.95			
Noneconomic Job Satisfaction	20	3.83	.94	.98			
Psychological Mobility	9	3.27	.47	.65[e]			
Attitude Toward Unions	20	2.66	.67	.90			
Union Instrumentality	36	4.31	1.00	.98	4.03	.91	.97
Voting Intention[f]	1	.38	.49				
Actual Voting Behavior[f]	1	.39	.49				

Continued

Table 6. Continued.

Variable	Number of Items	Community College (N=86)			University (N=658)		
		Mean	SD[a]	Reliability[b]	Mean	SD[a]	Reliability[b]

[a] SD = standard deviation.

[b] Cronbach's (1951) coefficient alpha.

[c] Dummy Coded: 0 = no, 1 = yes.

[d] For the University sample, trust in the administration contained 4 items.

[e] Kuder and Richardson (1937) formula 3 measure of internal consistency reliability.

[f] Dummy Coded: 0 = against the union, 1 = for the union.

mobility ($\bar{X}$ = 3.27; about neutral); attitude toward unions ($\bar{X}$ = 2.66; slightly negative); voting intention ($\bar{X}$ = .38; 38 percent prounion); and actual voting behavior ($\bar{X}$ = .39; 39 percent prounion). The University faculty were not surveyed about these unionization process variables (they were already organized and not about to vote in a union representation election) and therefore cannot be used for comparison. However, the means obtained for the community college sample are fairly close to those obtained in other faculty surveys (e.g., Bigoness, 1978; Gomez-Mejia & Balkin, 1984; Hamner & Berman, 1981; Zalesny, 1985), including one conducted on the university sample of the current study (Bigoness & Tosi, 1984).

Internal consistency reliabilities for all the scaled measures are shown in Table 6, and all are generally acceptable. It should be noted that Cronback's (1951) coefficient alpha is the reliability estimate used for each scale except psychological mobility. Kuder-Richardson formula 3 was used for psychological mobility, since it is a composite of two separate dimensions (ability to move and willingness to move; see the discussion in Chapter III) and since coefficient alpha is inappropriate for such a measure (see Nunnally, 1978, for a discussion of this issue).

Summary

The comparison of item means between the community college and university faculty responses on the trust in the employing organization's administration and the perceived union instrumentality scales suggest that the two faculty samples share similar sentiments in terms of trust (trust somewhat) and union instrumentality (neutral). In addition, the items means for the community college sample on the other unionization process variables suggest a somewhat committed, slightly stressed, generally job-satisfied faculty. Also, the community college faculty appear to have a neutral opinion about their economic job satisfaction, psychological mobility, and attitude toward unions. Chapter V discusses conclusions based upon these obtained results.

T-Test Results

In order to statistically assess differences between the community college faculty and the university faculty, MANOVA (multiple analysis of variance) and independent sample *t*-tests were performed on the variables discussed above. Two different predictor sets were used in the MANOVAs. One predictor set (Equation 1) included all personal characteristic variables (except for signing a union authorization card), trust in the employing organization's administration, and perceived union instrumentality. The other predictor set (Equation 2) included trust in the employing organization's administration, union instrumentality, and the same personal characteristic variables except for those which were dichotomously scored (e.g., sex, race, marital status, tenure, and teaching area). Results for both equations indicated an overall significant difference in the two samples' mean responses (Equation 1: N=681, $F_{31,649} = 15.94$, $p \leq .001$; and Equation 2: N = 693, $F_{20,672} = 17.41$, $p \leq .001$). Based on these MANOVA results, independent sample t-tests were then performed.

Table 7 shows the t-test results for the two faculty samples. (It was decided to report t-values instead of F-values since t-values show directionality and because in comparing two groups t^2 equals F; McNemar, 1969). As shown in Table 7, the results suggest no significant differences between the community college and university faculty samples for the following variables: race; age; years employed at their present institution; years employed in the teaching profession; years in their current occupation; arts and professions teaching areas; trust in the employing organization's administration. However, the results suggest significant ($p \leq .05$) mean differences between the faculty samples for the following variables: sex ($t = -6.88$); marital status ($t = -4.92$); number of dependents ($t = -4.66$); tenure ($t = 3.12$); educational level ($t = -10.31$); annual pay ($t = -5.74$); sciences teaching area ($t = -4.69$); and in perceived union instrumentality ($t = 2.44$). It appears that the community college sample have significantly fewer males and more females than the university sample. Also, fewer of the community college faculty are married and the community

Table 7. Comparison of T-Test Results for the Community College Faculty and University Faculty Samples.

Variable	Community College			University			t
	N	Mean	SD[a]	N	Mean	SD[a]	
Sex[b]	86	.51	.50	658	.89	.31	-6.88*
Race[b]	85	.97	.19	652	.95	.22	.62
Marital Status[b]	86	.58	.50	655	.85	.35	-4.92*
Number of Dependents	83	1.31	1.26	655	2.02	1.56	-4.66*
Age	86	4.55	1.82	657	4.47	2.06	.31
Years with Institution[c]	86	5.41	1.39	658	5.39	2.02	.07
Years in Teaching[c]	84	6.31	1.55	622	6.02	2.01	1.29
Years in Occupation	84	6.66	1.36	657	6.34	1.74	1.60
Tenure[b]	86	.86	.35	655	.73	.44	3.12*
Educational Level	86	6.28	1.27	658	7.72	.70	-10.31*
Annual Pay	84	3.52	.89	654	4.28	2.32	-5.74*
Arts Teaching Area[b]	86	.33	.47	658	.33	.47	- .05

Continued

Table 7. Continued.

Variable	Community College			University			
	N	Mean	SD[a]	N	Mean	SD[a]	t
Sciences Teaching Area[b]	86	.09	.29	658	.26	.44	-4.69*
Professions Teaching Area[b]	86	.43	.50	658	.35	.48	1.53
Trust in the Administration	86	4.78	1.38	658	4.61	1.23	1.16
Union Instrumentality	86	4.31	1.00	658	4.03	.91	2.44*

[a] SD = standard deviation.

[b] Dummy Coded: Sex: 0 = female, 1 = male. Race: 0 = nonwhite, 1 = white. Marital Status: 0 = unmarried, 1 = married. Tenure: 0 = no, 1 = yes. Teaching Area: 0 = not in area, 1 = in area.

[c] These items were assessed for the purpose of generalizability; they have not been previously discussed.

* $p \leq .05$.

college respondents reported significantly fewer dependents than the university sample. There also appears to be significantly fewer community college faculty in the sciences teaching area than in the university sample. And, as shown in Table 5, the community college sample reported significantly lower educational and pay levels than the university sample. In addition, the _t_-test results indicate that there are significantly more tenured community college faculty than tenured university faculty. Finally, the obtained results show that the community college faculty perceived unions as significantly more instrumental in obtaining desired work-related outcomes than did the university faculty.

Summary

Of the 16 mean comparison _t_-test results, half were statistically nonsignificant and half were significant. In particular, there appears to be significant differences between the two samples with respect to the proportion of males and females, the percent of faculty who are married, the average number of respondent dependents, the percent of tenured faculty, education and pay levels, the percent of faculty teaching in the sciences, and the favorableness of union instrumentality perceptions. On the other hand, there were no significant differences between the two samples with respect to race, age, years employed with their institutions, years in teaching, years in their current occupation, number of faculty teaching in either the arts or the professions, and trust in the employing organization's administration. Although these results are discussed further in Chapter V, it appears that the community college faculty is not drastically unlike the university faculty, and thus that perhaps the findings of this study can be generalized beyond the community college setting.

Tests of Hypotheses

The results of testing each of the hypotheses are presented below. As discussed in the previous chapter, Hypotheses 1 through 5 were examined by employing correlation analysis and Hypothesis 6 was tested using chi-square analysis. Simultaneous OLS multiple regression analysis was used to examine Hypotheses 7 through 9, since these hypotheses involve the prediction of a dependent variable by more than one independent variable.

Hypothesis 1

Hypothesis 1 proposes that individual personal characteristics, particularly, a respondent's race, organizational tenure, pay level, number of dependents, and signing a union authorization card, will be significantly related to attitude toward unions, perceived union instrumentality, intended voting behavior, and reported (actual) voting behavior. Table 8 presents the zero-order correlations testing these postulated relationships. (Appendix F

Table 8. Zero-Order Correlations with Attitude Toward Unions, Union Instrumentality, Voting Intention, and Actual Voting Behavior.

Variable	Attitude Toward Unions	Union Instrumentality	Voting Intention	Actual Voting Behavior
Personal Characteristics				
Sex	.10	.08	.04	.02
Race[a]	.11	.05	.16	.16
Marital Status	-.05	-.06	-.13	-.17
Number of Dependents[a]	.12	.12	.04	-.04
Age	-.08	-.05	-.04	-.06
Years in Occupation	-.16	-.14	-.03	-.12
Tenure[a]	.08	.09	.19	.17
Educational Level	.33*	.37*	.34*	.35*
Annual Pay[a]	-.09	-.04	.14	.03
Signing Authorization Card[a]	.70*	.65*	.81*	.79*
Arts Teaching Area	.20	.21*	.21*	.23*

Continued

Table 8. Continued.

Variable	Attitude Toward Unions	Union Instrumentality	Voting Intention	Actual Voting Behavior
Personal Characteristics Cont'd				
Sciences Teaching Area	.05	.03	.08	.02
Professions Teaching Area	-.23*	-.31*	-.27*	-.25*
Work Context				
Trust in the Administration[a]	-.54*	-.56*	-.61*	-.63*
Organizational Commitment	-.58*	-.62*	-.60*	-.60*
Job-related Stress	.34*	.37*	.48*	.49*
General Job Satisfaction	-.67*	-.64*	-.71*	-.74*
Economic Job Satisfaction[a]	-.64*	-.60*	-.67*	-.69*
Noneconomic Job Satisfaction[a]	-.62*	-.59*	-.66*	-.70*
Psychological Mobility	.18	.15	.09	.12
Attitude Toward Unions[a]	-	.79*	.78*	.79*
Union Instrumentality[a]	-	-	.81*	.81*

Continued

Table 8. Continued.

Variable	Attitude Toward Unions	Union Instrumentality	Voting Intention	Actual Voting Behavior
Voting Intention[a]	-	-	-	.97*

[a] Variable with specific hypothesized relationships (see Chapter III).

*$p \leq .05$.

contains the complete unionization process variable intercorrelation matrix.)

The results indicate that race, organizational tenure, pay level, and number of dependents are not related to attitude toward unions, but signing a union authorization card has a substantial positive correlation with a prounion attitude ($\underline{r} = .70$, $p \leq .05$). In addition to this specific postulated relationship, the results indicate that educational level has a positive association with attitude toward unions ($\underline{r} = .33$, $p \leq .05$) and that teaching in the professions area has a negative correlation with a prounion attitude ($\underline{r} = -.23$, $p \leq .05$).

The correlations between perceived union instrumentality and the hypothesized personal characteristics variables show that race, organizational tenure, pay level, and number of dependents are not related to union instrumentality. However, signing a union authorization card has a strong positive association ($\underline{r} = .65$, $p \leq .05$). Additionally, educational level and teaching in the arts area each have a positive correlation with union instrumentality ($\underline{r} = .37$, $p \leq .05$, and $\underline{r} = .21$, $p \leq .05$, respectively); teaching in the professions area has a negative relationship with union instrumentality ($\underline{r} = -.31$, $p \leq .05$).

Voting intention is not correlated with race, organizational tenure, pay level, or with number of dependents. However, signing a union authorization card and voting intention have a strong positive relationship ($\underline{r} = .81$,

$p \leq .05$). Educational level and teaching in the arts area are also positively related to voting intention ($r = .34$, $p \leq .05$, and $r = .21$, $p \leq .05$, respectively), and teaching in the professions area has a negative association with intended voting behavior ($r = -.21$, $p \leq .05$).

Finally, race, organizational tenure, pay level, and number of dependents are not related to actual voting behavior, but signing a union authorization card has a substantial positive association ($r = .79$, $p \leq .05$). Also, educational level and teaching in the arts area are positively associated with voting behavior ($r = .35$, $p \leq .05$, and $r = .23$, $p \leq .05$, respectively), and teaching in the professions area has a negative correlation with respondent voting ($r = -.25$, $p \leq .05$).

Summary

Hypothesis 1 was partially supported. Signing a union authorization card has a strong and statistically significant relationship with each of the postulated unionization process variables. However, none of the other specifically hypothesized personal characteristics variables obtained statistical significance. In addition to the postulated relationships, attitude toward unions has a significant correlation with educational level and teaching in the professions area. Also, union instrumentality, voting intention, and actual voting behavior each have a significant association with educational level and with teaching in the arts and professions areas.

Hypothesis 2

Hypothesis 2 proposes that work context attitudes, particularly trust in the employing organization's administration, economic job satisfaction, and noneconomic job satisfaction will be significantly related to attitude toward unions, perceived union instrumentality, intended voting behavior, and reported (actual) voting behavior. As indicated in Table 8, every one of these postulated relationships was substantial and statistically significant.

A positive attitude toward unions is negatively related to trust ($\underline{r} = -.54$, $p \leq .05$), economic job satisfaction ($\underline{r} = -.64$, $p \leq .05$), noneconomic job satisfaction ($\underline{r} = -.62$, $p \leq .05$), and general job satisfaction ($\underline{r} = -.67$, $p \leq .05$; a composite score of economic and noneconomic job satisfaction; see the discussion in Chapter III). In addition, prounion attitude has a negative correlation with organization commitment ($\underline{r} = -.58$, $p \leq .05$) and a positive association with job-related stress ($\underline{r} = .34$, $p \leq .05$).

A positive perception of union instrumentality has negative relationships with trust ($\underline{r} = -.56$, $p \leq .05$), economic job satisfaction ($\underline{r} = -.60$, $p \leq .05$), noneconomic job satisfaction ($\underline{r} = -.59$, $p \leq .05$), and general job satisfaction ($\underline{r} = -.64$, $p \leq .05$). Also, perceived instrumentality has a negative association with organizational commitment ($\underline{r} = -.62$, $p \leq .05$), and a positive correlation with job-related stress ($\underline{r} = .37$, $p \leq .05$).

Prounion voting intention is negatively correlated with trust ($\underline{r} = -.61$, $p \leq .05$), economic job satisfaction ($\underline{r} = -.67$, $p \leq .05$), noneconomic job satisfaction ($\underline{r} = -.66$, $p \leq .05$), and general job satisfaction ($\underline{r} = -.71$, $p \leq .05$). Also, organizational commitment has a negative association with prounion voting intention ($\underline{r} = -.60$, $p \leq .05$), and job-related stress has a positive relationship ($\underline{r} = .48$, $p \leq .05$).

Finally, trust ($\underline{r} = -.63$, $p \leq .05$), economic job satisfaction ($\underline{r} = -.69$, $p \leq .05$), noneconomic job satisfaction ($\underline{r} = -.70$, $p \leq .05$), and general job satisfaction ($\underline{r} = -.74$, $p \leq .05$) each have a negative correlation with prounion voting behavior. Also, organizational commitment has a negative relationship with prounion vote ($\underline{r} = -.60$, $p \leq .05$), and prounion voting is positively correlated with job-related stress ($\underline{r} = .49$, $p \leq .05$).

Summary

Hypothesis 2 was very strongly supported. Trust in the employing organization's administration, economic job satisfaction, noneconomic job satisfaction, and general job satisfaction are each strongly and significantly related to a prounion sentiment--attitude toward unions, perceived union instrumentality, intended voting behavior, and actual voting behavior. In addition to these specific postulated relationships, each of the prounion dependent variables is significantly associated with organizational commitment and job-related stress.

Hypothesis 3

Hypothesis 3 proposes that attitude toward unions will be significantly associated with perceived union instrumentality, intended voting behavior, and reported (actual) voting behavior. The results indicate that each of the postulated relationships was substantial and obtained significance (see Table 8). Specifically, attitude toward unions has a strong positive relationship with union instrumentality ($r = .79$, $p \leq .05$), voting intention ($r = .78$, $p \leq .05$), and voting behavior ($r = .79$, $p \leq .05$). Consequently, Hypothesis 3 is very strongly supported by these results.

Hypothesis 4

Hypothesis 4 proposes that perceived union instrumentality will be significantly associated with intended voting behavior and reported (actual) voting behavior. As shown in Table 8, perceived union instrumentality has a substantial positive and significant relationship with both voting intention and voting behavior ($r = .81$, $p \leq .05$, and $r = .81$, $p \leq .05$, respectively). Consequently, the obtained results very strongly support Hypothesis 4.

Hypothesis 5

Hypothesis 5 proposes that intended voting behavior will be significantly related to reported (actual) voting behavior. Table 8 indicates that voting intention and voting behavior were close to perfectly correlated, in the positive direction ($\underline{r} = .97$, $p \leq .05$). Consequently, Hypothesis 5 was very much supported by the results.

Hypothesis 6

Hypothesis 6 proposes that reported voting behavior will be significantly related to actual election results. In order to examine this postulated relationship, a chi-square analysis was performed, comparing reported (33 percent prounion and 60 percent antiunion) with actual voting results (34 percent prounion and 63 percent anti-union). The results of the analysis was a very weak chi-square of .3986 (with one degree of freedom), indicating a trivial and nonsignificant difference between reported voting behavior and actual election results. This supports the validity of the self-reported voting measure, as well as supporting Hypothesis 6.

Hypothesis 7

Hypothesis 7 proposes that perceived union instrumentality will be most strongly predicted by attitude toward unions, followed by work context variables, and finally by personal characteristic variables. Table 9 shows the results of the simultaneous regression analyses of perceived union instrumentality on all personal characteristics and work context attitude variables. Table 10 presents the simultaneous regression analyses of perceived union instrumentality on all personal characteristics, work context attitudes, and attitude toward unions predictors.

Table 9 shows that when only the personal characteristic variables are in the predictor set, union instrumentality is predicted by signing a union authorization card ($F = 33.30$, $p \leq .05$) and educational level ($F = 6.86$, $p \leq .05$) ($R^2 = .50$). When only the work context variables are regressed on union instrumentality, this prounion sentiment is predicted by organizational commitment ($F = 7.50$, $p \leq .05$) with an R^2 of .48. When both personal characteristic and work context variables are entered into the prediction equation, union instrumentality is predicted by signing a union authorization card and organizational commitment ($F = 11.53$, $p \leq .05$, and $F = 3.90$, $p \leq .05$, respectively; $R^2 = .60$). Finally, as shown in Table 10, when all personal characteristic variables, work context variables, and attitude toward unions are entered into the prediction equation, only attitude toward unions ($F = 27.07$, $p \leq .05$), teaching in the arts area ($F = 5.24$, $p \leq .05$), and educational level ($F = 4.40$, $p \leq .05$) predict union instrumentality ($R^2 = .73$).

Table 9. Simultaneous Regression Analysis of Attitude Toward Unions, Union Instrumentality, Voting Intention, and Actual Voting Behavior on All Personal Characteristic and Work Context Attitude Independent Variables.

Dependent Variable	Independent Variable	F	B	Total Model R^2	Unique Variable Δ in R^2	Dependent Variable	Independent Variable	F	B	Total Model R^2	Unique Variable Δ in R^2
	Personal Characteristic						Work Context Attitude				
Uatt	Autho	64.62*	.98*	.58*		Uatt	Ecosat	5.78*	-.31*	.48*	
Inst	Autho	33.30*	1.10*		.26	Inst	Orgcom	7.50*	-.56*	.48*	
	Educ	6.86*	.23*	.50*	.05						
Intent	Autho	86.60*	1.46*	.67*		Intent	Mobility	5.90*	-.46*		.03
							Ecosat	4.86*	-.38*	.55*	.03
Vote	Autho	69.66*	.74*	.64*		Vote	Ecosat	6.27*	-.23*		.04
							Nonecosat	5.05*	-.16*	.57*	.03
				Personal Characteristics and Work Context Attitudes							
Uatt	Autho	27.67*	.75*		.15	Inst	Autho	11.53*	.78*		.08
	Nonecosat	5.15*	-.27*		.03		Orgcom	3.90*	-.45*	.60*	.03
	Tenure	4.14*	-.36*	.68*	.05						

Continued

Table 9. Continued.

Dependent Variable	Independent Variable	F	B	Total Model R^2	Unique Variable Δ in R^2	Dependent Variable	Independent Variable	F	B	Total Model R^2	Unique Variable Δ in R^2
Intent	Autho	40.74*	1.15*		.18	Vote	Autho	27.91*	.54*		.14
	Mobility	7.17*	-.48*		.03		Nonecosat	5.48*	-.22*	.75*	.03
	Annual Pay	3.95*	.18*	.76*	.02						

Note. Autho = signing a union authorization card. Educ = educational level. Ecosat = economic job satisfaction. Nonecosat = noneconomic job satisfaction. Orgcom = organizational commitment. Mobility = psychological mobility. Uatt = attitude toward unions. Inst = union instrumentality. Intent = voting intention. Vote = actual voting behavior. Total model R^2 includes the effects of all entered variables, significant and nonsignificant, in the variable set (e.g., all demographic variables are the variable set when demographic variables are the regerssors; when demographic and work context variables are the regressors, all demographic and work context variables comprise the variable set that is simultaneously entered in the regression; etc.). Unique variable change (increase) in R^2 shows the effect of significant predictors only, controlling for the effects of all other variables in the model.

$^{*}p \leq .05$.

Table 10. Simultaneous Regression Analysis of Attitude Toward Unions on All Personal Characteristics, Work Context Attitudes, and Union Instrumentality; and of Union Instrumentality on All Personal Characteristics, Work Context Attitudes, and Attitude Toward Unions.

Attitude Toward Unions					Union Instrumentality				
Independent Variable	F	B	Total Model R^2	Unique Variable Δ in R^2	Independent Variable	F	B	Total Model R^2	Unique Variable Δ in R^2
Inst	27.07*	.35*		.11	Uatt	27.07*	.92		.13
Autho	13.43*	.48*	.79*	.06	Arts Teaching	5.24*	-.63*		.03
					Educ	4.40*	.15*	.73*	.02

Note. Autho = signing a union authorization card. Arts Teaching = arts teaching area. Educ = educational level. Inst = union instrumentality. Uatt = attitude toward unions. Total model R^2 includes the effects of all entered variables, significant and nonsignificant, in the variable set (e.g., all demographic variables are the variable set when demographic variables are the regressors; when demographic and work context variables are the regressors, all demographic and work context variables comprise the variable set that is simultaneously entered in the regression; etc.). Unique variable change (increase) in R^2 shows the effect of significant predictors only, controlling for the effects of all other variables in the model.

$^*p \leq .05$.

Summary

Hypothesis 7 was partially supported. Attitude toward unions most strongly predicts union instrumentality as predicted. However, only teaching in the arts area and educational level (both personal characteristics) contribute significantly to the prediction equation; none of the work context variables makes a significant contribution. A comparison of R^2s when union instrumentality is predicted only by personal characteristics variables (.50) and only by the work context variables (.48) also suggests that personal characteristics predict union instrumentality a bit more strongly than the work context variables, contrary to Hypothesis 7.

Hypothesis 8

Hypothesis 8 proposes that intended voting behavior will be most strongly predicted by perceived union instrumentality, followed by attitude toward unions, work context variables, and personal characteristics, in that order. Table 9 shows the simultaneous regression results of voting intention on all personal characteristic and work context attitude variables. Table 11 present the simultaneous regression results of voting intention on all the postulated independent variables.

As shown in Table 9, when only the personal characteristic variables are in the regression equation, voting intention is predicted by signing a union authorization

Table 11. Simultaneous Regression Analysis of Voting Intention and Actual Voting Behavior on All Personal Characteristics, Work Context Attitudes, Attitude Toward Unions, and Union Instrumentality.

Voting Intention					Actual Voting Behavior				
Independent Variable	F	B	Total Model R^2	Unique Variable Δ in R^2	Independent Variable	F	B	Total Model R^2	Unique Variable Δ in R^2
Inst	22.04*	.45*		.06	Intent	141.41*	.47*		.12
Autho	17.62*	.71*		.05	Ecosat	4.90*	-.09*	.96*	.01
Prof. Teaching	5.69*	.44*		.02					
Annual Pay	5.33*	.16*		.01					
Arts Teaching	5.10*	.47*	.86*	.01					

Note. Autho = signing a union authorization card. Prof. Teaching = professional teaching area. Arts Teaching = arts teaching area. Ecosat = economic job satisfaction. Inst = union instrumentality. Intent = voting intention. Total model R^2 includes the effects of all entered variables, significant and nonsignificant, in the variable set (e.g., all demographic variables are the variable set when demographic variables are the regressors; when demographic and work context variables are the regressors, all demographic and work context variables comprise the variable set that is simultaneously entered in the regression; etc.). Unique variable change (increase) in R^2 shows the effect of significant predictors only, controlling for the effects of all other variables in the model.

$^*p \leq .05$.

card ($F = 86.60$, $p \leq .05$), resulting in an R^2 of .67. When only the work context variables are in the predictor set, psychological mobility and economic job satisfaction ($F = 5.90$, $p \leq .05$, and $F = 4.86$, $p \leq .05$, respectively) significantly predict voting intention ($R^2 = .55$). However, when both personal characteristics and work context variables comprise the predictors, signing a union authorization card ($F = 40.74$, $p \leq .05$), psychological mobility ($F = 7.17$, $p \leq .05$), and annual pay level ($F = 3.95$, $p \leq .05$) predict voting intention ($R^2 = .76$). Finally, when all the postulated predictors are entered into the regression equation, Table 11 shows that union instrumentality ($F = 22.04$, $p \leq .05$) most strongly predicts voting intention, followed by signing a union authorization card ($F = 17.62$, $p \leq .05$), teaching in the professions area ($F = 5.69$, $p \leq .05$), annual pay level ($F = 5.33$, $p \leq .05$), and teaching in the arts area ($F = 5.10$, $p \leq .05$). The final regression equation containing all the predictor variables results in an R^2 of .86.

Summary

Hypothesis 8 was partially supported. As shown by the incremental R^2's of Table 11, perceived union instrumentality most strongly predicts voting intention. However, this is followed by signing a union authorization card, teaching in the professions and arts areas, and annual pay level; none of the work context variables make a significant contribution, nor does attitude toward unions. A comparison of R^2's when voting intention is predicted only by personal characteristics variables (.67) and only by work context variables (.55) (see Table 9) also suggests that personal characteristics predict voting intention better than do work context variables, contrary to Hypothesis 8.

Hypothesis 9

Hypothesis 9 proposes that reported (actual) voting behavior will be most strongly predicted by voting intention, followed by perceived union instrumentality, attitude toward unions, work context variables, and personal characteristics, in that order. Table 9 contains the results of the simultaneous regression analysis of voting behavior on all personal characteristics and work context variables. Table 11 presents the simultaneous regression results of voting behavior on all the postulated predictors.

When only personal characteristics are regressed on actual voting behavior (see Table 9), signing a union authorization card is the only variable to make a significant contribution ($F = 69.99$, $p \leq .05$), resulting in an R^2 of .64. When only work context variables are the predictors, voting behavior is significantly predicted by only economic and noneconomic job satisfaction ($F = 6.27$, $p \leq .05$, and $F = 5.05$, $p \leq .05$, respectively; $R^2 = .57$). When both personal characteristics and work context variables are regressed on voting behavior, signing a union authorization card ($F = 27.91$, $p \leq .05$) and noneconomic job satisfaction ($F = 5.48$, $p \leq .05$) make significant contributions ($R^2 = .75$). However, as shown in Table 11, when all the postulated predictors are entered into the regression equation, only intended voting behavior ($F = 141.41$, $p \leq .05$) and economic job satisfaction ($F = 4.90$, $p \leq .05$) make a significant contribution to predicting voting behavior ($R^2 = .96$).

Summary

Hypothesis 9 was partially supported. The results indicate that intended voting behavior is the strongest predictor of actual voting behavior, independently contributing .12 to the change in model R^2. Also, economic job satisfaction contributes significantly to the regression, with a .01 independent contribution to model R^2. However, neither union instrumentality nor attitude toward unions made a significant contribution to the regression, as predicted in Hypothesis 9. Also, a comparison of the R^2's when voting behavior is predicted by only personal characteristics (.64) and by only work context variables (.57) suggests that personal characteristics make a slightly higher contribution (as a group) than the work context variables. This, also, is contrary to Hypothesis 9.

Non-Hypothesized Union Attitude Results

The present study did not develop and test a hypothesis concerning which unionization process variables would predict attitude toward unions. However, following the variable ordering of the DeCotiis and LeLouarn (1981) model (Figure 4), it is plausible to expect that attitude toward unions would be most strongly predicted by union instrumentality, followed by work context variables, and then personal characteristics. Table 9 shows that when personal characteristics are the predictors, signing a union authorization card makes the only significant contribution ($F = 64.62$, $p \leq .05$; $R^2 = .58$). When work context variables are the only predictors, economic job satisfaction makes the only significant contribution ($F = 5.78$, $p \leq .05$: $R^2 = .48$). When both personal characteristics and work context variables are in the predictor set, signing a union authorization card ($F = 27.67$, $p \leq .05$), noneconomic job satisfaction ($F = 5.15$, $p \leq .05$), and organizational tenure ($F = 4.14$, $p \leq .05$) make significant contributions, with a total R^2 of .68. Finally, Table 10 shows that when personal characteristics, work context variables, and union instrumentality comprise the predictor set, only union instrumentality and signing a union authorization card make significant contributions ($F = 27.07$, $p \leq .05$, and $F = 13.43$, $p \leq .05$, respectively; $R^2 = .79$). These findings, while not pertaining to any hypothesis, are generally congruent with those pertaining to Hypotheses 7 through 9. The work context attitude predictors fared poorly when compared to union instrumentality and the signing of a union authorization card. More is said concerning this later (in Chapter V).

Summary

The results of testing each of the nine hypotheses was presented. The obtained results suggest that Hypothesis 1 was only slightly supported; only signing a unionization card had a strong significant correlation with the four dependent variables. Hypothesis 2 was very strongly supported; trust in the employing organization's administration, economic job satisfaction, noneconomic job satisfaction, and general job satisfaction were each substantially associated with attitude toward unions, union instrumentality, voting intention, and voting behavior. Hypothesis 3 was also very strongly supported by the obtained results; attitude toward unions was highly related to union instrumentality, voting intention, and voting behavior. Hypotheses 4, 5, and 6 were also substantially supported. The results indicated that union instrumentality was strongly correlated with voting intention and voting behavior (Hypothesis 4), that voting intention was highly associated with voting behavior (Hypothesis 5), and that reported voting behavior was almost identical to the actual election results (Hypothesis 6).

Hypotheses 7 through 9 were all partially supported by the simultaneous regression results. Union instrumentality was significantly predicted by attitude toward unions, teaching in the arts area, and educational level (Hypothesis 7). Voting intention was significantly associated with union instrumentality, signing a union authorization card, teaching in the professions and arts areas, and annual pay (Hypothesis 8). Finally, voting intention and economic job satisfaction significantly contributed to the prediction of actual voting behavior (Hypothesis 9). The implications of these results are discussed in Chapter V. Presented next are the results of testing the four plausible unionization process models that were presented and discussed in Chapters II and III.

Tests of the Unionization Process Models

As explained in Chapter III, the present investigation was a longitudinal field study that utilized both hypothesis-testing and exploratory approaches. The tests of the hypotheses were presented above and no "undebatable" causal pattern or ordering is apparent from them. As discussed in Chapter III, the literature (see Chapter II) also does not provide support for an undebatable causal ordering, nor does it provide enough information to specify (on an a priori basis) specific personal characteristic or specific work context variables that clearly should be included in models of the unionization process. Consequently, the present study adopted an empirical approach and performed stepwise regression analysis to determine which independent variables should be included in the path-analytic examination of the four plausible rival unionization process models that were developed in Chapter II. The results of the stepwise regression analyses are presented below, followed by the unionization process model path analyses which were based upon them.

Stepwise Regression Analysis Results

Table 12 presents the results of the stepwise regressions of attitude toward unions, perceived union instrumentality, intended voting behavior, and actual voting behavior on all personal characteristic and work context attitude independent variables. The following discussion of these results is in sections according to the dependent variable of interest. Since these analyses were exploratory, an alpha of .10 was used as the significance level for inclusion in the stepwise regression equations.

Attitude toward unions. When attitude toward unions is the dependent variable of interest and only personal characteristics variables are in the predictor set, three variables enter the regression equation. Signing a union authorization card enters the equation first ($F = 73.57$, $p \leq .05$), followed by educational level ($F = 3.80$, $p \leq .10$), and then number of respondent dependents ($F = 3.01$, $p \leq .10$). The total model R^2 of .54 stems from the sequential incremental effects of signing a union authorization

Table 12. Stepwise Regression Analysis of Attitude Toward Unions, Union Instrumentality, Voting Intention, and Actual Voting Behavior on All Personal Characteristic and Work Context Attitude Independent Variables.

Step and Variable entered	Dependent Variable	Model R^2	F to enter	Sequential Variable Δ in R^2	B	Step and Variable entered	Dependent Variable	Model R^2	F to enter	Sequential Variable Δ in R^2	B
Personal Characteristic						Work Context Attitude					
1. Autho	Uatt		73.57	.49	.94**	1. Ecosat	Uatt		56.84	.40	- .55**
2. Educ			3.80	.03	.08*	2. Nonecosat		.45*	6.73	.05	- .23*
3. Dep		.54*	3.01	.02	.08*	1. Orgcom	Inst		51.59	.38	- .88**
1. Autho	Inst		50.01	.40	1.21**	2. Nonecosat		.44*	8.26	.06	- .35**
2. Educ		.46*	8.80	.06	.19**	1. Ecosat	Intent		66.13	.44	- .83**
1. Autho	Intent		123.10	.62	1.50**	2. Nonecosat			9.45	.06	- .37**
2. Educ		.64*	4.73	.02	.11**	3. Mobility			3.09	.02	- .31**
1. Autho	Vote		102.33	.60	.76**	4. Orgcom		.55*	5.20	.03	- .40**
2. Educ		.63*	5.30	.03	.06**	1. Nonecosat	Vote		72.24	.48	- .37**
						2. Ecosat		.55*	12.16	.07	- .26**

Continued

Table 12. Continued.

Step and Variable entered	Dependent Variable	Model R^2	F to enter	Sequential Variable Δ in R^2	B	Step and Variable entered	Dependent Variable	Model R^2	F to enter	Sequential Variable Δ in R^2	B
					Personal Characteristics and Work Context Attitude						
1. Autho	Uatt		73.57	.49	.94**	1. Autho	Inst		50.01	.40	1.21**
2. Nonecosat			12.17	.07	- .25**	2. Orgcom			12.29	.08	- .49**
3. Yrocc			6.10	.03	- .09**	3. Educ		.51*	3.95	.03	.13**
4. Tenure			5.35	.03	- .33**	1. Autho	Vote		102.33	.60	.76**
5. Stress		.64*	3.53	.02	- .22*	2. Nonecosat			17.19	.08	- .21**
1. Autho	Intent		123.10	.62	1.50**	3. Yrocc		.70*	3.41	.02	- .04*
2. Nonecosat		.68*	13.73	.06	- .32**						

Note. Autho = signing a union authorization card. Educ = educational level. Dep = number of dependents. Yrocc = years in occupation. Ecosat = economic job satisfaction. Nonecosat = noneconomic job satisfaction. Orgcom = organizational commitment. Mobility = psychological mobility. Stress = job-related stress. Uatt = attitude toward unions. Inst = union instrumentality. Intent = voting intention. Vote = actual voting behavior. Only significant ($p \leq .10$) predictors (at the time of entry) are included in these models. Sequential variable change (increase) in R^2 shows the effect of each variable at the step in which it is entered, controlling for the variable(s) already entered before it.

*$p \leq .10$. **$p \leq .05$.

card (.49), educational level (.03), and number of dependents (.02).

The next analysis involves only work context variables as the regressors. Economic job satisfaction ($F = 56.84$, $p \leq .05$) and noneconomic job satisfaction ($F = 6.73$, $p \leq .10$) enter this equation (in that order), to predict attitude toward unions. Economic job satisfaction has an initial effect on the model R^2 of .40 and noneconomic job satisfaction's subsequent effect of .05 (total model $R^2 = .45$).

When both personal characteristics and work context variables are the predictors, five variables enter the regression equation. Signing a union authorization card enters first, with $F = 73.57$ ($p \leq .05$). Noneconomic Job satisfaction enters next with $F = 12.17$ ($p \leq .05$). This is followed by number of years in the current occupation ($F = 6.10$, $p \leq .05$), organizational tenure ($F = 5.35$, $p \leq .05$), and psychological stress ($F = 3.53$, $p \leq .10$), in that order. The resulting model R^2 of .64 is derived from the sequential effect of each entered variable (.49, .07, .03, .03, and .02, respectively).

Perceived union instrumentality. Union instrumentality was first examined with only personal characteristic variables in the predictor set. The results show that only signing a union authorization card ($F = 50.01$, $p \leq .05$) and educational level (F = 8.80, $p \leq .05$) make a significant contribution (in that order) to the prediction of union instrumentality. The final model R^2 consists of the sequential effect of each of the independent variables (.40 and .06, respectively), explaining 46 percent of the variance in perceived union instrumentality.

Next, union instrumentality was assessed with only work context variables in the regression equation. Organizational commitment is the first variable to enter (F = 51.59, $p \leq .05$), followed by noneconomic job satisfaction (F = 8.26, $p \leq .05$). The resulting model R^2 comes from the sequential contribution of organizational commitment (.38) and noneconomic job satisfaction (.06), and indicates that 44 percent of the variance in perceived union instrumentality is explained by these two variables.

Finally, when union instrumentality was predicted by both personal characteristics and work context variables, three variables enter the equation. Signing a union authorization card is the first to enter (F = 50.01, $p \leq .05$), followed by organization commitment (F = 12.29, $p \leq .05$), and then by educational level (F = 3.95, $p \leq .05$). The final model R^2 of .51 stems from the sequential variable effects of signing a union authorization card (.40), organizational commitment (.08), and educational level (.03).

Intended voting behavior. Voting intention was also examined by regressing the three variable sets used above. When only the personal characteristic variables are in the regression equation, signing a union authorization card ($F = 123.10$, $p \leq .05$) is the first to enter; it is followed by educational level ($F = 4.73$, $p \leq .05$). This equation results in a model R^2 of .64, with signing a union authorization card accounting for .62 and educational level accounting for .02 of the sequential explained variance.

When only work context variables are in the predictor set, four variables enter the regression equation. Economic job satisfaction enters first ($F = 66.13$, $p \leq .05$), followed by noneconomic job satisfaction ($F = 9.45$, $p \leq .05$), psychological mobility ($F = 3.09$, $p \leq .05$), and organizational commitment ($F = 5.20$, $p \leq .05$), in that order. The resulting model R^2 is derived from the sequential effect of each entered variable (.44, .06, .02, and .03, respectively), explaining 55 percent of the variance in intended voting behavior.

Finally, when both personal characteristics and work context variables are regressed on voting intention, signing a union authorization card enters first, with $F = 123.10$ ($p \leq .05$); this is followed by noneconomic job satisfaction, with $F = 13.73$ ($p \leq .05$). The final model R^2 of .68 derives from the sequential contribution of these predictors (.62 and .06, respectively).

Actual voting behavior. As done above, voting behavior was first examined with only personal characteristics variables as the predictors. The obtained results show two variables as entering the equation--signing a union authorization card ($F = 102.33$, $p \leq .05$) and educational level ($F = 5.30$, $p \leq .05$). Signing a union authorization card contributes .60 and educational level contributes .03, sequentially, to the final model R^2 of .63.

Next, work context variables were the predictors and two variables enter the regression equation. Noneconomic job satisfaction enters first ($F = 72.24$, $p \leq .05$) and economic job satisfaction enters second ($F = 12.16$, $p \leq .05$). The resulting model R^2 of .55 is due to the sequential effect of noneconomic job satisfaction (.48), and economic job satisfaction (.07).

Finally, voting behavior was examined with both personal characteristics and work context variables in the regression equation. The obtained results show that signing a union authorization card ($F = 102.33$, $p \leq .05$), noneconomic job satisfaction ($F = 17.19$, $p \leq .05$), and number of years in current occupation ($F = 3.41$, $p \leq .10$) enter the equation, in that order. The final model R^2 stems from the sequential effect of each predictor variable (.60, .08, and .02, respectively), explaining 70 percent of the variance in actual voting behavior.

Table 13 presents the results of stepwise regression analyses of attitude toward unions on all personal characteristics, work context attitudes, and perceived union instrumentality, and of perceived union instrumentality on all personal characteristics, work context attitudes, and

Table 13. Stepwise Regression Analysis of Attitude Toward Unions on All Personal Characateristics, Work Context Attitudes, and Union Instrumentality; and of Union Instrumentality on All Personal Characteristics, Work Context Attitudes, and Attitude Toward Unions.

Attitude Toward Unions					Union Instrumentality				
Step and Variable entered	Model R^2	F to enter	Sequential Variable Δ in R^2	B	Step and Variable entered	Model R^2	F to enter	Sequential Variable Δ in R^2	B
1. Inst		141.72	.65	.56**	1. Uatt		141.72	.65	1.16**
2. Autho		16.14	.06	.43**	2. Educ	.67*	4.84	.02	.11**
3. Nonecosat		3.35	.01	-.11*					
4. Annual Pay	.74*	3.58	.01	-.09*					

Note. Autho = signing a union authorization card. Nonecosat = noneconomic job satisfaction. Educ = educational level. Inst = union instrumentality. Uatt = attitude toward unions. Only significant ($p \leq .10$) predictors (at the time of entry) are included in these models. Sequential variable change (increase) in R^2 shows the effect of each variable at the step in which it is entered, controlling for the variable(s) already entered before it.

$^{*}p \leq .10$. $^{**}p \leq .05$.

attitude toward unions. The discussion of these results below is by the dependent variable involved.

Union attitude. When all the personal characteristics, work context variables, and union instrumentality are regressed on attitude toward unions, four variables enter the equation. Union instrumentality enters first, with $F = 141.72$ ($p \leq .05$), followed by signing a union authorization card ($F = 16.14$, $p \leq .05$), then noneconomic job satisfaction ($F = 3.35$, $p \leq .10$), and then annual pay level ($F = 3.58$, $p \leq .10$), in that order. The final model R^2 is .74, consisting of the sequential contribution of each of the predictors (.65, .06, .01, and .01, respectively).

Union instrumentality perception. When all the personal characteristics, work context variables, and attitude toward unions are regressed on union instrumentality, two variables enter the equation. First, attitude toward unions enters with $F = 141.72$ ($p \leq .05$) and then education level enters with $F = 4.84$ ($p \leq .05$). The resulting model R^2 is derived from the sequential effect of each entered variable (.65 and .02, respectively), explaining 67 percent of the variance in perceived union instrumentality.

Table 14 presents the results of the stepwise regression analysis of intended voting behavior and actual voting behavior on all personal characteristics, work context attitudes, attitude toward unions, and perceived union

Table 14. Stepwise Regression Analysis of Voting Intention and Actual Voting Behavior on All Personal Chracteristics, Work Context Attitudes, Attitude Toward Unions, and Union Instrumentality.

Voting Intention					Actual Voting Behavior				
Step and Variable entered	Model R^2	F to enter	Sequential Variable Δ in R^2	B	Step and Variable entered	Model R^2	F to enter	Sequential Variable Δ in R^2	B
1. Inst		142.23	.66	.80**	1. Intent		1077.43	.94	.50**
2. Autho		44.07	.13	.88**	2. Ecosat		5.91	.01	- .06**
3. Annual Pay		6.56	.01	.14**	3. Yrocc		6.61	.00	- .03**
4. Nonecosat		3.18	.01	-.13*	4. Orgcom	.95*	5.07	.00	.06**
5. Mobility	.82*	3.96	.01	-.21**					

Note. Inst = union instrumentality. Autho = signing a union authorization card. Nonecosat = noneconomic job satisfaction. Mobility = psychological mobility. Intent = voting intention. Ecosat = economic job satisfaction. Yrocc = years in occupation. Orgcom = organizational commitment. Only significant ($p \leq .10$) predictors (at the time of entry) are included in these models. Sequential variable change (increase) in R^2 shows the effect of each variable at the step in which it is entered, controlling for the variable(s) already entered before it.

$^*p \leq .10$. $^{**}p \leq .05$.

instrumentality. The following discussion of these results is by the dependent variable concerned.

Voting intent. When the full voting intention model is tested (i.e., all the proceeding unionization process variables are in the predictor set), five variables enter the voting intent regression equation. Union instrumentality enters first, with F = 142.23 ($p \leq .05$). This is followed by signing a union authorization card (F = 44.07, $p \leq .05$), annual pay level (F = 6.56, $p \leq .05$), noneconomic job satisfaction (F = 3.18, $p \leq .10$), and psychological mobility (F = 3.96, $p \leq .05$), in that order. The resulting final model R^2 of .82 consists of the sequential contribution of each predictor by their order of entry (.66, .13, .01, .01, and .01, respectively).

Actual vote. When the full voting behavior model is tested (i.e., all the preceding unionization process variables are in the predictor set), four variables enter the actual vote regression equation. Voting intention enters the equation first, with F = 1077.43 ($p \leq .05$). This is followed by economic job satisfaction (F = 5.91, $p \leq .05$), number of years in the current occupation (F = 6.61, $p \leq .05$), and organizational commitment (F = 5.07, $p \leq .05$), in that order. The resulting model R^2 of .95 consists of the sequential effects of these variables; it should perhaps be noted that both number of years in the current occupation and organizational commitment were significant predictors, but each added less than .005 to the total explained variance in actual voting behavior.

Summary of Stepwise Regression Analysis Results

Stepwise regression analyses were performed in the present investigation to determine which independent variables would be included in the subsequent unionization process model path analyses. The obtained results suggest that five personal characteristic variables contribute to the prediction of union instrumentality and/or attitude toward unions: signing a union authorization card; educational level; annual pay level; number of years in the current occupation; and organization tenure. The results also suggest that three work context variables contribute to the prediction of union instrumentality and/or attitude toward unions: organizational commitment; noneconomic job satisfaction; and psychological stress. The results indicate that attitude toward unions is a predictor of union instrumentality, and that union instrumentality is a predictor of attitude toward unions. The results suggest that union instrumentality, signing a union authorization card, annual pay level, noneconomic job satisfaction, and psychological mobility predict intended voting behavior. Finally, voting intention, economic job satisfaction, number of years in the current occupation, and organizational commitment predict actual voting behavior.

Initial and Intermediate Path Analysis Results

As explained in Chapter III, four different causal models of the unionization process were examined in the present investigation. First, the four rival unionization process models were tested (see Figure 6) using the significant predictors uncovered in the stepwise regression analyses. As shown in Table 15, the four models were first examined with an "unrestricted predictor set." Any independent variable that made a significant ($p \leq .05$) contribution to the prediction of _either_ union instrumentality _or_ attitude toward unions was included in the path analyses. Then, as shown in Table 16, the four models were examined with a "restricted predictor set." Only those independent variables that significantly ($p \leq .05$) predicted union instrumentality were included in the path analyses of union instrumentality; only those independent variables that significantly ($p \leq .05$) predicted attitude toward unions were included in the path analyses of attitude toward unions. The results of the first path analyses, utilizing the unrestricted predictor set (Table 15), and the second path analyses, using the restricted predictor set (Table 16), are presented below (The model numbers A_1, B_1, A_2, and B_2 refer to the models shown in Figure 6).

Unrestricted predictor set--initial results. Table 15 presents the results of the first path analyses of the four rival unionization process models with unrestricted predictor sets. For Model A_1, significant ($p \leq .05$) and

Table 15. First Path Analysis of Plausible Unionization Process Models Without a Restricted Predictor Set. (N=78)

Model	Path Coefficient	Dependent Variable	Independent Variable	Beta	B	t	Total Model R^2	Model Error $(1-R^2)$
A_1	32_1	Inst	Autho	.44	.86	4.32*		
	32_2		Educ	.10	.07	1.05		
	32_3		Annual Pay	.03	.03	.29		
	32_4		Yrocc	-.14	-.10	-1.52		
	32_5		Tenure	-.11	-.29	-1.14		
	31_1		Orgcom	-.20	-.29	-1.66		
	31_2		Nonecosat	-.24	-.27	-1.81		
	31_3		Stress	-.10	-.19	- .95	.54*	.46
	43	Uatt	Inst	.78	.52	11.41*	.62*	.38
B_1	42_1	Uatt	Autho	.55	.72	5.99*		
	42_2		Educ	.04	.02	.47		
	42_3		Annual Pay	-.05	-.04	- .60		
	42_4		Yrocc	-.15	-.07	-1.91		

Continued

Table 15. Continued.

Model	Path Coefficient	Dependent Variable	Independent Variable	Beta	B	t	Total Model R^2	Model Error $(1-R^2)$
	42_5		Tenure	-.17	-.30	-1.95		
	41_1		Orgcom	-.05	-.05	- .49		
	41_2		Nonecosat	-.40	-.30	-3.38*		
	41_3		Stress	-.16	-.22	-1.79	.62*	.38
	34	Inst	Uatt	.78	1.19	11.41*	.62*	.38
A_2	32_1	Inst	Autho	.44	.86	4.32*		
	32_2		Educ	.10	.07	1.05		
	32_3		Annual Pay	.03	.03	.29		
	32_4		Yrocc	-.14	-.10	-1.52		
	32_5		Tenure	-.11	-.29	-1.14		
	31_1		Orgcom	-.20	-.29	-1.66		
	31_2		Nonecosat	-.24	-.27	-1.81		
	31_3		Stress	-.10	-.19	- .95	.54*	.46

Continued

Table 15. Continued.

Model	Path Coefficient	Dependent Variable	Independent Variable	Beta	B	t	Total Model R^2	Model Error $(1-R^2)$
	43	Uatt	Inst	.46	.31	4.96*		
	42_1		Autho	.35	.46	3.91*		
	42_2		Educ	-.01	-.00	- .07		
	42_3		Annual Pay	-.06	-.05	- .85		
	42_4		Yrocc	-.09	-.04	-1.30		
	42_5		Tenure	-.12	-.21	-1.57		
	41_1		Orgcom	.04	.04	.39		
	41_2		Nonecosat	-.29	-.22	-2.78*		
	41_3		Stress	-.12	-.16	-1.50	.72*	.28
B_2	42_1	Uatt	Autho	.55	.72	5.99*		
	42_2		Educ	.04	.02	.47		
	42_3		Annual Pay	-.05	-.04	- .60		
	42_4		Yrocc	-.15	-.07	-1.91		

Continued

Table 15. Continued.

Model	Path Coefficient	Dependent Variable	Independent Variable	Beta	B	t	Total Model R^2	Model Error $(1-R^2)$
	42_5		Tenure	-.17	-.30	-1.95		
	41_1		Orgcom	-.05	-.05	- .49		
	41_2		Nonecosat	-.40	-.30	-3.38*		
	41_3		Stress	-.16	-.22	-1.79	.62*	.38
	34	Inst	Uatt	.56	.83	4.96*		
	32_1		Autho	.13	.28	1.22		
	32_2		Educ	.07	.06	.94		
	32_3		Annual Pay	.05	.06	.68		
	32_4		Yrocc	-.05	-.04	- .62		
	32_5		Tenure	-.02	-.04	- .18		
	31_1		Orgcom	-.17	-.25	-1.62		
	31_2		Nonecosat	-.01	-.02	- .11		

Continued

Table 15. Continued.

Model	Path Coefficient	Dependent Variable	Independent Variable	Beta	B	t	Total Model R^2	Model Error $(1-R^2)$
	31_3		Stress	-.01	-.01	- .50	.66*	.34

Note. Work context variable (1) subscripts are: 1 = organizational commitment. 2 = noneconomic job satisfaction. 3 = psychological stress. Personal characteristics variable (2) subscripts are: 1 = signing a union authorization card. 2 = educational level. 3 = annual pay. 4 = years in current occupation. 5 = organizational tenure. Variable abbreviations are: Inst = union instrumentality. Uatt = attitude toward unions. Autho = signing a union authorization card. Educ = educational level. Yrocc = years in current occupation. Orgcom = organizational commitment. Nonecosat = noneconomic job satisfaction. Total model R^2 refers to the R^2 obtained for the ultimate dependent variable of the model, either union attitude or union instrumentality.

$^*p \leq .05$.

Table 16. First Path Analysis of Plausible Unionization Process Models With a Restricted Predictor Set. (N=78)

Model	Path Coefficient	Dependent Variable	Independent Variable	Beta	B	t	Total Model R^2	Model Error $(1-R^2)$
A_1	32_1	Inst	Autho	.44	.86	4.67*		
	32_2		Educ	.15	.11	1.68		
	31_1		Orgcom	-.30	-.43	-3.04*	.51*	.49
	43	Uatt	Inst	.78	.52	11.41*	.62*	.38
B_1	42_1	Uatt	Autho	.57	.75	6.54*		
	42_4		Yrocc	-.19	-.09	-2.62*		
	42_5		Tenure	-.20	-.36	-2.53*		
	41_2		Nonecosat	-.45	-.34	-4.67*		
	41_3		Stress	-.17	-.22	-1.97	.62*	.38
	34	Inst	Uatt	.78	1.19	11.41*	.62*	.38
A_2	32_1	Inst	Autho	.44	.86	4.67*		
	32_2		Educ	.15	.11	1.68		
	31_1		Orgcom	-.30	-.43	-3.04*	.51*	.49

Continued

Table 16. Continued.

Model	Path Coefficient	Dependent Variable	Independent Variable	Beta	B	t	Total Model R^2	Model Error $(1-R^2)$
B_2	43	Uatt	Inst	.50	.34	5.85*		
	42_1		Autho	.29	.34	3.46*		
	42_3		Annual Pay	-.11	-.08	-1.72		
	41_2		Nonecosat	-.17	-.13	-2.13*	.70*	.30
	42_1	Uatt	Autho	.57	.75	6.54*		
	42_4		Yrocc	-.19	-.09	-2.62*		
	42_5		Tenure	-.20	-.36	-2.53*		
	41_2		Nonecosat	-.45	-.34	-4.67*		
	41_3		Stress	-.17	-.22	-1.97	.62*	.38
	34	Inst	Uatt	.74	1.10	10.06*		
	32_2		Educ	.13	.09	1.70	.62*	.38

Continued

Table 16. Continued.

Model	Path Coefficient	Dependent Variable	Independent Variable	Beta	B	t	Total Model R^2	Model Error $(1-R^2)$

Note. Work context variable (1) subscripts are: 1 = organizational commitment. 2 = noneconomic job satisfaction. 3 = psychological stress. Personal characteristics variable (2) subscripts are: 1 = signing a union authorization card. 2 = educational level. 3 = annual pay. 4 = years in current occupation. 5 = organizational tenure. Variable abbreviations are: Inst = union instrumentality. Uatt = attitude toward unions. Autho = signing a union authorization card. Educ = educational level. Yrocc = years in current occupation. Orgcom = organizational commitment. Nonecosat = noneconomic job satisfaction. Total model R^2 refers to the R^2 obtained for the ultimate dependent variable of the model, either union attitude or union instrumentality.

$^{*}p \leq .05$.

interpretable (Beta $\geq .20$) paths exist from the union authorization card personal characteristic to union instrumentality ($P32_1 = .44$) and from union instrumentality to attitude toward unions ($P43 = .78$); these two paths are both positive, and no other paths are significant and interpretable. For Model B_1, significant and interpretable ($p \leq .05$ and Beta $\geq .20$) positive paths occur from signing a union authorization card to attitude toward unions ($P42_1 = .55$) and from attitude toward unions to union instrumentality ($P34 = .78$); a significant and interpretable negative path occurs from noneconomic job satisfaction (a work context variable) to attitude toward unions ($P41_2 = -.40$); no other paths are significant and interpretable.

The results for Model A_2 indicate that significant and interpretable positive paths exist from signing a union authorization card to union instrumentality ($P32_1 = .44$), from union instrumentality to attitude toward unions ($P43 = .46$), and from signing a union authorization card to attitude toward unions ($P42_1 = .35$). Also, a significant and interpretable negative path exists from noneconomic job satisfaction to attitude toward unions ($P41_2 = -.29$); no other paths are significant. Finally, for Model B_2, significant and interpretable positive paths occur from signing a union authorization card to attitude toward unions ($P42_1 = .55$) and from attitude toward unions to union instrumentality ($P34 = .56$). A significant and interpretable negative path occurs from noneconomic job satisfaction to attitude toward unions ($P41_2 = -.40$), and no other paths are significant and interpretable.

Restricted predictor set--initial results. Table 16 shows the results of the first path analyses of the four rival unionization process models with restricted predictor sets. For Model A_1, significant and interpretable ($p \leq .05$ and Beta $\geq .20$) positive paths exist from signing a union authorization card to union instrumentality ($P32_1 = .44$) and from union instrumentality to attitude toward unions ($P43 = .78$). A significant and interpretable negative path exists from organizational commitment to union instrumentality ($P31_1 = -.30$). No other paths are significant and interpretable. For Model B_1, significant and interpretable positive paths occur from signing a union authorization card to attitude toward unions ($P42_1 = .57$) and from attitude toward unions to union instrumentality ($P34 = .78$). Significant negative paths also occur from years in occupation to attitude toward unions ($P42_4 = -.19$), from organizational tenure to attitude toward unions ($P42_5 = -.20$), and from noneconomic job satisfaction to attitude toward union ($P41_2 = -.45$). The coefficient for years in occupation, however, does not exceed .20 and it is therefore not interpretable as a meaningful path relationship. All the other significant paths are interpretable, and no other Model B_1 paths are significant.

The results for Model A_2 indicate that meaningful ($p \leq .05$ and Beta $\geq .20$) positive paths exist from signing a union authorization card to union instrumentality ($P32_1 = .44$) and from signing a union authorization card to attitude toward unions ($P42_1 = .29$). A meaningful positive path exists between union instrumentality and attitude toward unions ($P43 = .50$), and a meaningful negative path exists from organizational commitment to union instrumentality ($P31_1 = -.30$); no other paths are both significant and interpretable. Finally, for Model B_2 positive paths occur from signing a union authorization card to attitude toward unions ($P42_1 = .57$) and from attitude toward unions to union instrumentality ($P34 = .74$). Also, meaningful negative paths occur from organizational tenure to attitude toward unions ($P42_5 = -.20$) and from noneconomic job satisfaction to attitude toward unions ($P41_2 = -.45$). No other Model B_2 paths are significant and interpretable.

Given the above findings, the obtained path coefficients for the unrestricted and restricted predictor set models were re-estimated after deleting all nonsignificant ($p > .05$) and/or negligible ($Beta < .20$) paths. The results of these intermediate analyses, utilizing the unrestricted predictor set (Table 17) and the restricted predictor set (Table 18), are presented below.

Unrestricted predictor set--intermediate results. Table 17 presents the results of the intermediate path analyses of the four rival unionization process models with unrestricted predictor sets. For Model A_1, meaningful positive paths exist only from the union authorization card

Table 17. Intermediate Path Analysis of Plausible Unionization Process Models Without a Restricted Predictor Set. (N=78)

Model	Path Coefficient	Dependent Variable	Independent Variable	Beta	B	t	Total Model R^2	Model Error $(1-R^2)$
A_1	32_1	Inst	Autho	.65	1.29	7.72*	.42*	.58
	43	Uatt	Inst	.78	.52	11.41*	.62*	.38
B_1	42_1	Uatt	Autho	.53	.70	5.94*		
	41_2		Nonecosat	-.31	-.22	-3.47*	.56*	.44
	34	Inst	Uatt	.78	1.19	11.41*	.62*	.38
A_2	32_1	Inst	Autho	.65	1.29	7.72*	.42*	.58
	43	Uatt	Inst	.51	.34	5.85*	.69*	.31
	42_1		Autho	.29	.38	3.40*		
	41_2		Nonecosat	-.14	-.10	-1.79	.69*	.31
B_2	42_1	Uatt	Autho	.53	.70	5.94*		
	41_2		Nonecosat	-.31	-.22	-3.47*	.56*	.44
	34	Inst	Uatt	.78	1.19	11.41*	.62*	.38

Continued

Table 17. Continued.

Model	Path Coefficient	Dependent Variable	Independent Variable	Beta	B	t	Total Model R^2	Model Error $(1-R^2)$

Note. Work context variable (1) subscripts are: 2 = noneconomic job satisfaction. Personal characteristics variable (2) subscripts are: 1 = signing a union authorization card. Variable abbrevations are: Inst = union instrumentality. Uatt = attitude toward unions. Autho = signing a union authorization card. Nonecosat = noneconomic job satisfaction. Total model R^2 refers to the R^2 obtained for the ultimate dependent variable of the model, either union attitude or union instrumentality.

$^{*}p \leq .05$.

Table 18. Intermediate Path Analysis of Plausible Unionization Process Models With a Restricted Predictor Set. (N=78)

Model	Path Coefficient	Dependent Variable	Independent Variable	Beta	B	t	Total Model R^2	Model Error $(1-R^2)$
A_1	32_1	Inst	Autho	.45	.90	4.83*		
	31_1		Orgcom	-.37	-.53	-3.94*	.51*	.49
	43	Uatt	Inst	.78	.52	11.41*	.62*	.38
B_1	42_1	Uatt	Autho	.54	.71	6.17*		
	42_5		Tenure	-.15	-.29	-1.99*		
	41_2		Nonecosat	-.35	-.25	-3.91*	.58*	.42
	34	Inst	Uatt	.78	1.19	11.41*	.62*	.38
A_2	32_1	Inst	Autho	.45	.90	4.83*		
	31_1		Orgcom	-.37	-.53	-3.94*	.51*	.49
	43	Uatt	Inst	.57	.37	6.84*		
	42_1		Autho	.33	.44	4.03*	.68*	.32
B_2	42_1	Uatt	Autho	.54	.71	6.17*		
	42_5		Tenure	-.15	-.29	-1.19*		

Continued

Table 18. Continued.

Model	Path Coefficient	Dependent Variable	Independent Variable	Beta	B	t	Total Model R^2	Model Error $(1-R^2)$
	41_2		Nonecosat	-.35	-.25	-3.91*	.58*	.42
	34	Inst	Uatt	.78	1.19	11.41*	.62*	.38

Note. Work context variable (1) subscripts are: 1 = organizational commitment. 2 = noneconomic job satisfaction. Personal characteristics variable (2) subscripts are: 1 = signing a union authorization card. 5 = organizational commitment. Variable abbrevations are: Inst = union instrumentality. Uatt = attitude toward unions. Autho = signing a union authorization card. Orgcom = organizational commitment. Nonecosat = noneconomic job satisfaction. Total model R^2 refers to the R^2 obtained for the ultimate dependent variable of the model, either union attitude or union instrumentality.

$^*p \leq .05$.

personal characteristic to union instrumentality ($P32_1$ = .65) and from union instrumentality to attitude toward unions (P43 = .78). For Model B_1, meaningful positive paths occur from the personal characteristic of signing a union authorization card to attitude toward unions ($P42_1$ = .53) and from attitude toward unions to union instrumentality (P34 = .78). A meaningful negative path occurs from the work context variable of noneconomic job satisfaction to attitude toward unions ($P41_2$ = -.31), and no other paths are significant and interpretable.

The results for Model A_2 indicate the significant and interpretable ($p \leq .05$ and Beta $\geq .20$) positive paths exist from the personal characteristic of signing a union authorization card to union instrumentality ($P32_1$ = .65), from union instrumentality to attitude toward unions (P43 = .51), and from signing a union authorization card to attitude toward unions ($P42_1$ = .29); no other paths are meaningful. Finally, for Model B_2, meaningful paths occur from signing a union authorization card to attitude toward unions ($P\ 42_1$ = .53) and from attitude toward unions to union instrumentality (P34 = .78). A meaningful negative path occurs from the work context variable of noneconomic job satisfaction to attitude toward unions ($P41_2$ = -.31); no other paths are meaningful.

Restricted predictor set--intermediate results. Table 18 presents the results of the intermediate path analyses of the four rival unionization process models with restricted predictor sets. For Model A_1, significant and interpretable positive paths exist from signing a union authorization card to union instrumentality ($P32_1 = .45$) and from union instrumentality to attitude toward unions ($P43 = .78$). A significant and interpretable negative path exists from organizational commitment to union instrumentality ($P31_1 = -.37$). No other paths are meaningful. For Model B_1, significant and interpretable positive paths occur from signing a union authorization card to attitude toward unions ($P42_1 = .54$) and from attitude toward unions to union instrumentality ($P34 = .78$). A meaningful negative path occurs from noneconomic job satisfaction to attitude toward unions ($P41_2 = -.35$); no other paths are significant and interpretable.

The results of Model A_2 indicate that meaningful positive paths exists from signing a union authorization card to union instrumentality ($P32_1 = .45$), from union instrumentality to attitude toward unions ($P43 = .57$), and from signing a union authorization card to attitude toward unions ($P42_1 = .33$). Also, a meaningful negative path exists from organizational commitment to union instrumentality ($P31_1 = -.37$). No other Model A_2 paths are significant and interpretable. Finally, for Model B_2, meaningful positive paths occur from signing a union authorization card to attitude toward unions ($P42_1 = .54$) and from attitude toward unions to union instrumentality ($P34 = .78$). A meaningful negative path occurs from noneconomic job satisfaction to attitude toward unions ($P41_2 = -.35$). No other Model B_2 paths are significant and interpretable.

Final Path Analysis Results and Rival Causal Model Evaluations

Final path analysis results. As the last step in the path analysis process, the obtained intermediate coefficients were re-estimated after all nonsignificant ($p > .05$) and/or negligible ($Beta < .20$) paths were deleted. This produced the following final results; these are shown in Tables 19 and 20.

When an unrestricted predictor set is used (see Table 19), Model A_1 has meaningful positive paths for signing a union authorization card to union instrumentality ($P32_1 = .65$) and from union instrumentality to attitude toward unions ($P43 = .78$). For Model B_1, three meaningful paths exist, these are from noneconomic job satisfaction to attitude toward unions ($P41_2 = -.31$), from signing a union authorization card to attitude toward unions ($P42_1 = .53$), and from attitude toward unions to union instrumentality ($P34 = .78$). For Model A_2 the final paths are from signing a union authorization card to union instrumentality ($P32_1 = .65$), from signing a union authorization card to attitude toward unions ($P42_1 = .33$), and from union instrumentality to attitude toward unions ($P43 = .57$). Finally, for Model B_2, the meaningful paths are from noneconomic job satisfaction to attitude toward unions ($P41_2 = -.31$), from

Table 19. Final Path Analysis of Plausible Unionization Process Models Without a Restricted Predictor Set. (N=78)

Model	Path Coefficient	Dependent Variable	Independent Variable	Beta	B	t	Total Model R^2	Model Error $(1-R^2)$
A_1	32_1	Inst	Autho	.65	1.29	7.72*	.42*	.58
	43	Uatt	Inst	.78	.52	11.41*	.62*	.38
B_1	42_1	Uatt	Autho	.53	.70	5.94*		
	41_2		Nonecosat	-.31	-.22	-3.47*	.56*	.44
	34	Inst	Uatt	.78	1.19	11.41*	.62*	.38
A_2	32_1	Inst	Autho	.65	1.29	7.72*	.42*	.58
	43	Uatt	Inst	.57	.37	6.84*		
	42_1		Autho	.33	.44	4.03*	.68*	.32
B_2	42_1	Uatt	Autho	.53	.70	5.94*		
	41_2		Nonecosat	-.31	-.22	-3.47*	.56*	.44
	34	Inst	Uatt	.78	1.19	11.41*	.62*	.38

Continued

Table 19. Continued.

Model	Path Coefficient	Dependent Variable	Independent Variable	Beta	B	t	Total Model R^2	Model Error $(1-R^2)$

Note. Work context variable (1) subscripts are: 2 = noneconomic job satisfaction. Personal characteristics variable (2) subscripts are: 1 = signing a union authorization card. Variable abbreviations are: Inst = union instrumentality. Uatt = attitude toward unions. Autho = signing a union authorization card. Nonecosat = noneconomic job satisfaction. Total model R^2 refers to the R^2 obtained for the ultimate dependent variable of the model, either union attitude or union instrumentality.

$^*p \leq .05$.

Table 20. Final Path Analysis of Plausible Unionization Process Models With a Restricted Predictor Set. (N=78)

Model	Path Coefficient	Dependent Variable	Independent Variable	Beta	B	t	Total Model R^2	Model Error $(1-R^2)$
A_1	32_1	Inst	Autho	.45	.90	4.83*		
	31_1		Orgcom	-.37	-.53	-3.94*	.51*	.49
	43	Uatt	Inst	.78	.52	11.41*	.62*	.38
B_1	42_1	Uatt	Autho	.53	.70	5.94*		
	41_2		Nonecosat	-.31	-.22	-3.47*	.56*	.44
	34	Inst	Uatt	.78	1.19	11.41*	.62*	.38
A_2	32_1	Inst	Autho	.45	.90	4.83*		
	31_1		Orgcom	-.37	-.53	-3.94*	.51*	.49
	43	Uatt	Inst	.57	.37	6.84*		
	42_1		Autho	.33	.44	4.03*	.68*	.32
B_2	42_1	Uatt	Autho	.53	.70	5.94*		
	41_2		Nonecosat	-.31	-.22	-3.47*	.56*	.44
	34	Inst	Uatt	.78	1.19	11.41*	.62*	.38

Continued

Table 20. Continued.

Model	Path Coefficient	Dependent Variable	Independent Variable	Beta	B	t	Total Model R^2	Model Error $(1-R^2)$

Note. Work context variable (1) subscripts are: 1 = organizational commitment. 2 = noneconomic job satisfaction. Personal characteristics variable (2) subscripts are: 1 = signing a union authorization card. 5 = organizational commitment. Variable abbrevations are: Inst = union instrumentality. Uatt = attitude toward unions. Autho = signing a union authorization card. Orgcom = organizational commitment. Nonecosat = noneconomic job satisfaction. Total model R^2 refers to the R^2 obtained for the ultimate dependent variable of the model, either union attitude or union instrumentality.

$^{*}p \leq .05$.

signing a union authorization card to attitude toward unions ($P42_1 = .53$), and from attitude toward unions to union instrumentality ($P34 = .78$). Consequently, it appears that Model B_1 and Model B_2 have identical final path coefficients and, as such, Model B_2 reduces to the more parsimonious Model B_1.

When a restricted predictor set is used (see Table 20), Model A_1 has meaningful paths for organizational commitment to union instrumentality ($P31_1 = -.37$), from signing a union authorization card to union instrumentality ($P32_1 = .45$), and from union instrumentality to attitude toward unions ($P43 = .78$). For Model B_1, the final paths are from noneconomic job satisfaction to attitude toward unions ($P41_2 = -.31$), from signing a union authorization card to attitude toward unions ($P42_1 = .53$), and from attitude toward unions to union instrumentality ($P34 = .78$). For Model A_2, the final paths are from organizational commitment to union instrumentality ($P31_1 = -.37$), from signing a union authorization card to union instrumentality ($P32_1 = .45$), from signing a union authorization card to attitude toward unions ($P42_1 = .33$), and from union instrumentality to attitude toward unions ($P43 = .57$). Finally, for Model B_2, the meaningful paths are from noneconomic job satisfaction to attitude toward unions ($P41_2 = -.31$), from signing a union authorization card to attitude toward unions ($P42_1 = .53$), and from attitude toward unions to union instrumentality ($P34 = .78$). Consequently, as for the unrestricted predictor set, it appears that Model B_1 and Model B_2 have identical final path coefficients and, as such, Model B_2 reduces to the more parsimonious Model B_1.

In examining the resulting rival unionization process models with their final path coefficients, it becomes apparent that Model B_1 with both unrestricted and restricted predictor sets has the same path coefficients (and variables) as Model B_2 with both unrestricted and restricted predictor sets. Consequently, all of the B models collapse into a single Model B_1 (regardless of the predictor set restrictions). However, none of the four A models are identical, and thus two unrestricted predictor set A models (Model A_{1u} and A_{2u}) and two restricted predictor set A models (Model A_{1r} and A_{2r}) remain.

Rival causal model evaluations. Multicollinearity in path coefficients leads to unstable path coefficients and, hence, impairs generalizability (Jermier & Schriesheim, 1978). Thus, to assess the degree of variable multicollinearity among the three- and four-variable sets in the surviving rival causal models, Haitovsky's (1969) test of the variable correlation matrix was performed. As discussed previously (see Chapter III), the determinant of a singular matrix (indicative of perfectly multicollinear variables) is 0, while the determinant for a correlation matrix of perfectly orthogonal variables is 1. When the variable set consists of signing a union authorization card, union instrumentality, and attitude toward unions (Models A_{1u} and

A_{2u}), the resulting chi-square of 126.86 [with (3 x 2)/ = 3 degrees of freedom] indicates a nonsingular variable matrix at alpha less than .00001. When the variable set contains organizational commitment, signing a union authorization card, union instrumentality, and attitude toward unions (Models A_{1r} and A_{2r}), the chi-square of 8.20 [with (4 x 3)/2 = 6 degrees of freedom] suggests a nonsingular matrix at an alpha of less than .22. Finally, when the variables are noneconomic job satisfaction, signing a union authorization card, attitude toward unions, and union instrumentality (Model B_1), the resulting chi-square of 8.15 [with (4 x 3)/2 = 6 degrees of freedom] indicates a nonsingular variable matrix at an alpha of less than .23. Thus, the Haitovsky (1969) test for variable interdependence suggests that no excessive multicollinearity exists among the variables in unrestricted Models A_1 and A_2. For restricted Models A_1 and A_2 and for the B models, however, generalizability of results is problematic. This is an important issue and it is therefore discussed further in Chapter V.

As mentioned in Chapter III, each of the final unionization process models implies a correlation matrix which can be calculated using the path coefficients (see Heise, 1969, for a discussion of the mechanics of these calculations). Once these implied matrices are calculated, the relative viability of each model can be assessed by how closely the implied matrix is to the actual correlation matrix. As a general rule, models with average absolute differences (between correlations) of greater than .05 are considered unsatisfactory (Kerlinger & Pedhazur, 1973).

Table 21 shows the results of the matrix calculations. None of the average absolute differences between the actual and implied correlations exceed .05 and thus any of the models would be considered adequate. However, the model with the smallest average absolute difference is considered the "best" model since it most closely approximates the actual correlation matrix. As discussed above, Model B_1 is the same as Model B_2 for both the unrestricted and restricted predictor sets. As shown in Table 21, the B models have the smallest average absolute difference (.001) and therefore appear to be the best representation of the unionization process. Thus, Figure 7 shows the final unionization process model and its associated path coefficients; these come from the unrestricted and restricted B_1 and B_2 analyses.

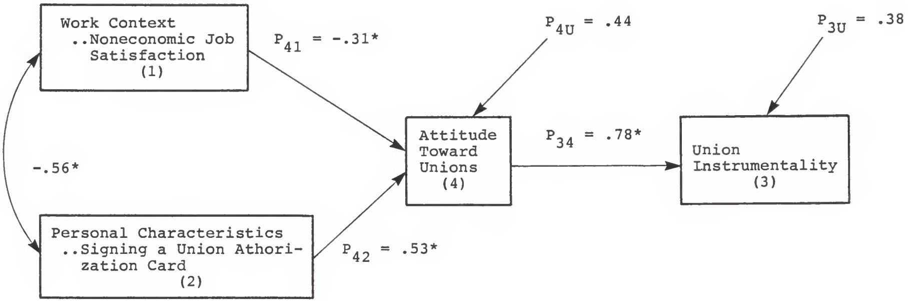
Summary of the Path Analysis Results

Four different causal models of the unionization process were examined. Based on the stepwise regression results, the models were tested with both "unrestricted" and "restricted" predictor sets. The resulting path coefficients for each model were re-estimated after deleting all nonsignificant and/or negligible paths until only paths that were both statistically significant and that had a Beta

Table 21. Average Absolute Differences Between the Actual and Implied Correlation Matrices of the Four Plausible Unionization Process Models.

Model	Unrestricted Predictor Set	Restricted Predictor Set
A_1	.044	.013
B_1	.001	.001
A_2	.040	.006
B_2	.001	.001

Note. All table entries represent average absolute differences between the actual correlations among the variables (Appendix F) and the correlations implied by the obtained path coefficients (Tables 19 and 20). See Heise (1969, pp. 70-71) for a discussion of the mechanics of these calculations.



*$p \leq .05$.

Figure 7. The Final Unionization Process Model . . . Model B_1.

greater than .20 remained. This process of testing--deletion--re-estimation continued until two unrestricted predictor set models (Models A_{1u} and A_{2u}), two restricted predictor set models (Models A_{1r} and A_{2r}), and Model B_1 remained.

Haitvosky's (1969) test of the variable correlation matrix was performed to assess the degree of variable multicollinearity among the unionization process model's variables. It was determined that no excessive multicollinearity existed among the variables for the A_{1u} and A_{2u} models, but the multicollinearity was problematic for the other models.

Finally, the average absolute differences between the actual and implied correlation matrices for each of the models was calculated. The results suggested that Model B_1 had the smallest average absolute difference and, as such, appeared to be the best representation of the unionization process in the current data set. As pointed out in Chapter III and above, these results are based on the stepwise regression analyses of the current data set and, as such, may not be replicated--generalizability remains to be seen.

Respondent Group Membership Classification

The final analysis to be presented here is a discriminant analysis that was conducted on an exploratory basis. This procedure was used to determine the best predictors (in the least-squares sense) of the respondents' group membership with respect to voting intention and voting behavior.

Using both the simultaneous and stepwise regression analyses presented earlier, discriminant analyses were performed on intended voting behavior and on reported (actual) voting behavior. As outlined in Chapter III, the purpose of the analysis was twofold. First, to treat the regression predictors in a more statistically appropriate manner since both voting intent and voting behavior are dichotomous dependent variables. [Discriminant analysis was used to determine the degree to which discriminant functions would correctly classify the respondents into either the prounion or antiunion group. In other words, when intended voting behavior was the dependent variable, the two discriminating groups represented those who intended to vote against the union (coded 0) and those who intended to vote for the union (coded 1). When actual voting behavior was the dependent variable, the two discriminating groups represented those who reported voting against the union (coded 0) and those who reported voting for the union (coded 1).] Secondly, this statistical method was employed to compare discriminant function results with regression results.

Only predictors that obtained significance at $p \leq .05$ in either the simultaneous regressions (see Table 11) or in the stepwise regressions (see Table 14) were selected for the discriminating functions and, as such, the following independent variables were examined. When the simultaneous regression results were used and voting intention was the dependent variable of interest, the discriminating variables consisted of union instrumentality, signing a union authorization card, teaching in the professions area, annual pay, and teaching in the arts area. When voting behavior was the dependent variable of interest, voting intention and economic job satisfaction were the discriminating variables. However, when the stepwise regression results were used and voting intention was the dependent variable of interest, the discriminating variables consisted of union instrumentality, signing a union authorization card, annual pay, and psychological mobility. And, when voting behavior was the dependent variable, voting intention, economic job satisfaction, number of years in the current occupation, and organizational commitment were the discriminating variables. Since there was no a prior rationale for specifying an entry order for the independent variables in any of the functions, the entire set (in all analyses) was entered simultaneously (variables that did not have a tolerance of .001 or better were not entered; the tolerance of a variable is the proportion of its within-groups variance not accounted for by the other variables in the analysis). Finally, the pooled within-groups covariance matrix was used for each analysis, rather than the unpooled matrix, since it is typically used in discriminant analysis (see Klecks, 1980, for a discussion of this issue). (Also, a comparison of results from identical pooled and unpooled covariance matrix analyses indicated no material differences between the two types.) The following discussion of the discriminant analyses results is organized by the dependent variable of interest.

Discriminant Analysis Results for the Simultaneous Regressions

Intended voting behavior. Two predictor sets were used to discriminate voting intention. Equation 1 included all five of the significant simultaneous regression predictors: union instrumentality; signing a union authorization card; annual pay; teaching in the arts area; and teaching in the professions area. Equation 2 excluded signing a union authorization card and teaching in the professions and arts areas since these variables were dichotomously scored.

When Equation 1 was used to predict intended voting behavior, the canonical discriminant function results in an eigenvalue of 4.51, a canonical correlation of .91, and a Wilk's lambda of .1814 (chi-square$_4$ = 127.19, $p \leq .001$). Thus, the proportion of variation in the discriminant function associated with group membership is 82 percent. Also, the pooled within-groups correlation between the discriminating variables and the canonical discriminant function indicate that signing a union authorization card (.67) and union instrumentality (.65) are the primary discriminating variables in the function, followed by teaching in the professions area (-.15), teaching the arts area (.10), and annual pay (.07), in that order. Finally, Equation 1 correctly classifies 96.20 percent of the respondents.

When Equation 2 was used to predict voting intention, the canonical discriminant function results in an eigenvalue of 2.18, a canonical correlation of .83, and a Wilk's lambda of .3146 ($\text{chi-square}_2 = 87.89$, $p \leq .001$). Therefore, the proportion of variation in the discriminant function associated with group membership is 69 percent. Here, the pooled within-groups correlation between the discriminating variables and the canonical discriminant function suggest that the primary discriminating variable is union instrumentality (.94), followed by annual pay (.10). Finally, Equation 2 correctly classifies 94.94 percent of the respondents.

A comparison of the Equation 1 and Equation 2 obtained results suggests that Equation 1 is a better discriminant function. Equation 1's eigenvalue and canonical correlation are each larger than Equation 2's, which suggests that Equation 1 has more discriminating power and explains more variation in group membership than Equation 2. Also, Equation 1 correctly classifies 1.26 percent more respondents than does Equation 2.

In summary, two prediction equations were used to discriminate voting intention group membership. The discriminant function that contained all five of the discriminating variables (Equation 1) was considered better since it correctly classified a greater percentage of respondents, had more discriminating power, and explained more variation in group membership.

Actual voting behavior. Two predictor sets were also used to discriminate voting behavior. Equation 1 included both significant simultaneous regression predictors: voting intention and economic job satisfaction. Equation 2 excluded voting intention from the discriminating variables since it is highly intercorrelated with voting behavior ($r = .97$) and because it is a dichotomous variable. However, voting intent failed to satisfy the tolerance criterion and so it was statistically deleted from the analysis. Consequently, Equation 2 comprised the only discriminant function.

Using Equation 2 to predict actual voting behavior results in a canonical discriminant function with an eigenvalue of .90, a canonical correlation of .69, and a Wilk's lambda of .5266 ($\text{chi-square}_1 = 45.85$, $p \leq .001$). Thus, the proportion of variance in the discriminant function associated with group membership is 48 percent (the pooled within-groups correlation between economic job satisfaction and the canonical discriminant function is, of course, 1.0). Finally, Equation 2 correctly classifies 78.48 percent of the respondents.

In summary, an attempt was made to use two separate prediction equations to discriminate voting behavior group membership. However, due to the high intercorrelation of voting intention and voting behavior, voting intention failed to enter the discriminant function. The resulting equation correctly classified more than 78 percent of the respondents.

Discriminant Analysis Results for the Stepwise Regressions

Intended voting behavior. Two predictor sets were used to discriminate voting intention. Equation 1 included all four of the significant stepwise regression predictors: signing a union authorization card; psychological mobility; union instrumentality; and annual pay. Equation 2 excluded signing a union authorization card from the discriminating variables since it is a dichotomous variable.

When Equation 1 was used to predict intended voting behavior, the canonical discriminant function results in an eigenvalue of 4.48, a canonical correlation of .90, and a Wilk's lambda of .1824 ($\text{chi-square}_4 = 127.63$, $p \leq .001$). Thus, the proportion of variation in the discriminant function associated with group membership is 81 percent. Also, the pooled within-groups correlation between the discriminating variables and the canonical discriminant function suggests that signing a union authorization card (.68) and union instrumentality (.65) are the primary discriminating variables in the function, followed by annual pay (.07), and psychological mobility (.04), in that order. Finally, Equation 1 correctly classifies 94.94 percent of the respondents.

When Equation 2 was used to predict intended voting intention, the canonical discriminant function results in an eigenvalue of 2.18, a canonical correlation of .83, and a Wilk's lambda of .3145 (chi-square_3 = 87.33, $p \leq .001$). Therefore, the proportion of variation in the discriminant function associated with group membership is 69 percent. Here, the pooled within-groups correlation between the discriminating variables and the canonical discriminant function suggests that union instrumentality (.94) is the primary discriminating variable in the function, followed by annual pay (.10) and then psychological mobility (.06). Finally, Equation 2 correctly classifies 94.94 percent of the respondents.

A comparison of the Equation 1 and Equation 2 obtained results suggests that although both equations correctly classify 94.94 percent of the respondents, Equation 1 is a better discriminant function. Equation 1's eigenvalue and canonical correlation are each larger than Equation 2's, which suggests that Equation 1 has more discriminating power and explains more variation in group membership than Equation 2.

In summary, two prediction equations were used to discriminate voting intention group membership. Both equations correctly classified more than 94 percent of the respondents. However, the discriminant function that contained signing a union authorization card (Equation 1) was considered better since it had more discriminating power and explained more variation in group membership.

Actual voting behavior. Two predictor sets were used to discriminate voting behavior. Equation 1 included all four of the significant stepwise regression predictors: voting intention; economic job satisfaction, number of years in the current occupation; and organizational commitment. Equation 2 excluded voting intention from the discriminating variables since, as explained above, it is highly correlated with voting behavior and is a dichotomous variable. However, as in the previous analysis, voting intention failed to satisfy the tolerance criterion as it was statistically deleted from the analysis. Consequently, Equation 2 comprised the only discriminant function.

When Equation 2 was used to predict actual voting behavior, the canonical discriminant function results in an eigenvalue of .93, a canonical correlation of .69, and a Wilk's lambda of .5189 (chi-square$_3$ = 44.94, $p \leq .001$). Thus, the proportion of variation in the discriminant function associated with group membership is 48 percent. Also, the pooled within-groups correlation between the discriminating variables and the canonical discriminant function indicates that economic job satisfaction (.94) is the primary discriminating variable in the function, followed by organization commitment (.79) and then years in the current occupation (.06). Finally, Equation 2 correctly classifies 81.82 percent of the respondents.

In summary, an attempt was made to use separate prediction equations to discriminate voting behavior group membership. However, due to the high intercorrelation of voting intention and voting behavior, voting intention failed to enter the discriminant function. The resulting equation correctly classified more than 81 percent of the respondents.

Comparison of Discriminant Analysis Results

Intended voting behavior. Comparing the simultaneous regression predictors (Equation 1: union instrumentality, signing a union authorization card, teaching in the professions area, annual pay, and teaching in the arts area; Equation 2: union instrumentality and annual pay) and the stepwise regression predictors (Equation 1: singing a union authorization card, psychological mobility, union instrumentality, and annual pay; Equation 2: psychological mobility, union instrumentality, and annual pay) suggests that simultaneous Equation 1 is the "best" voting intention discrimination function. This equation is considered better since it has more discriminating power (an eigenvalue of 4.51 versus 4.48 and 2.18), it explains more variation in group membership (a squared canonical correlation of .82 versus .81 and .69), and it correctly classifies a larger percentage of respondents (96.20 versus 94.94).

Actual voting behavior. Comparing the simultaneous regression predictors (economic job satisfaction) and the stepwise regression predictors (economic job satisfaction, years in the current occupation, and organizational commitment) suggests that the stepwise equation is the "best" voting behavior discriminating function. This equation is considered better even though it explains the same variation in group membership (.48) because it has more discriminating power (an eigenvalue of .93 versus .90) and because it correctly classifies a larger percentage of respondents (81.82 versus 78.48).

Comparison of Discriminant and Regression Analysis Results

Intended voting behavior. Comparing both the simultaneous and stepwise regression analyses results with the discriminant analyses results suggests that, regardless of the statistical analysis employed, union instrumentality and signing a union authorization card are the primary predictors and/or discriminators of voting intention. The stepwise regressions (with five predictors) resulted in an R^2 of .82, as compared with the simultaneous regression (including all the postulated predictors; see Chapter III) R^2 of .86. Consequently, for this sample of community college respondents, neither the regression analyses nor the discriminant analyses would have led to the wrong theoretical conclusions regarding predictors of intended voting behavior in a union representation election. Thus, although the regression model's R^2's and the regression weights may not be completely trustworthy (see the discussion in Chapter III regarding normality assumption violations), the main conclusions about the significant predictors of intent are invariant with respect to the data-analytic methods employed.

Actual voting behavior. Comparing both the simultaneous and stepwise regression analyses results with the discriminant analyses results suggest that, regardless of the statistical analysis used, intended voting behavior is the primary predictor and/or discriminator of voting behavior. The simultaneous regression results (containing all the postulated predictors; see Chapter III) produced an R^2 of .96, as compared with the stepwise regression (with four predictors) R^2 of .95. Although the regression results cannot be directly compared with the discriminant results, since voting intent failed to enter the discriminant function (see the discussion above), for this sample of community college respondents neither the regression analyses nor the discriminant analyses would have supplied the wrong theoretical conclusions regarding the importance of voting intent as a predictor of actual voting behavior in a union representation election. Consequently, although the model's R^2's and the regression weights may not be completely trustworthy (see Chapter III), the major conclusion is the same.

Summary

Chapter IV presented the results of the present investigation. The descriptive statistics for the community college faculty sample and the university faculty sample were compared and the reliability coefficients for the measures were found to meet acceptable levels. The MANOVA and *t*-test results of the two samples suggested that the community college findings might reasonably be considered generalizable.

The results of testing each of the study's nine hypotheses were discussed. The results indicated that Hypothesis 2 through 6 were strongly supported and that Hypotheses 1 and 7 through 9 were partially supported.

The discussion next turned to the stepwise regression results which identified the independent variables for the subsequent path and discriminant analyses. The path analysis results suggested that Model B_1 best represents the unionization process. This model consisted of noneconomic job satisfaction, signing a union authorization card, attitude toward unions, and union instrumentality. The discriminant analysis resulted in a model that correctly classified more than 96 percent of the respondents with respect to voting intention and a model that correctly classified more than 81 percent of the respondents with respect to reported (actual) voting behavior. Finally, a comparison of the discriminant and regression analysis results suggested that, regardless of the statistical method employed, the conclusion with respect to the significant predictors of voting intent and voting behavior are identical. That is, union instrumentality and signing a union authorization card are the primary predictors/discriminators of voting intention, and voting intention is the primary predictor/discriminator of voting behavior for the community college faculty of the present study.

Chapter V will discuss conclusions and future directions based upon the results of the present investigation. It also briefly outlines the limitations of previous research and the present study.

CHAPTER V

DISCUSSION AND CONCLUSION

Chapter Overview

This chapter discusses the current investigation. First, the generalizability of the findings beyond the community college setting is discussed, followed by the results of the nine hypothesis tests that were conducted (see Chapter III). Next, the discussion turns to the interpretation of the unionization process model results and to the selection of the model that best represents the unionization process. Finally, the chapter ends with a discussion of the limitations of previous empirical studies, limitations of the present investigation, and suggestions for future research.

Generalizability of the Community College Findings

The results of this study indicate no difference between the sampled community college and university facilities with respect to 8 of the 16 variables examined. In particular, the two higher education faculty samples are similar in race, age, years employed with their institutions, years in teaching, years in their current occupation, the percentage of faculty teaching in either the arts or the professions, and trust in the employing organization's administration. Of the 8 variables where the faculties significantly differ, the education and pay level differences are congruent with institutional differences typically found between these two types of higher education faculties and, as such, are not surprising. Five of the remaining 6 variable differences (proportion of males and females, the percent of married faculty, the average number of respondent dependents, the percent of tenured faculty, and the percent of faculty teaching in the sciences) are personal characteristics and, as discussed below, none of these variables reached significance in subsequent analyses with the community college sample. Consequently, although the community college and university faculty samples differed on these personal characteristics, the lack of variable significance in later analyses indicates that these differences are probably unimportant.

Finally, the two faculty samples differed with respect to the favorableness of union instrumentality perceptions. Contrary to both sample's union representation status (the majority of the community college faculty voted against representation while the university faculty were represented), the community college faculty perceived their union as significantly more instrumental than did the university faculty. A possible explanation for this result is that the community college faculty had to have at least moderate union instrumentality perceptions for the union representation process to even begin. The university faculty, on the other hand, are employed in a "flagship" institution that is part of a state-wide multicampus bargaining unit; they may very well be less prounion than their fellow collective bargaining unit members. However, regardless of why the two samples differed significantly on union instrumentality perceptions, an examination of the mean responses (community college $\bar{X} = 4.31$, university faculty $\bar{X} = 4.03$) indicates that neither sample is strongly positive about a union's instrumentality--both are relatively neutral despite the community college faculty's being less so (more positive). Thus, although there are differences between the two faculty samples on a number of variables, the community college faculty is really not substantially different from the university faculty. This suggests that the findings of this study may generalize beyond the community college setting, although replication studies certainly would be highly desirable.

Hypothesis Test Results

Discussion

The hypothesis-testing results of this study clearly show the importance of the personal characteristic of signing a union authorization card (and the relative unimportance of the other personal characteristics that were examined) with respect to faculty voting behavior in a union representation election. In addition, these findings demonstrate the importance of economic job satisfaction, and the relative unimportance of the other work context variables that were assessed. Finally, attitude toward unions, union instrumentality, and voting intention were each shown to be important attitudinal variables in the prediction of faculty union representation voting behavior.

As hypothesized (see Hypothesis 1 in Chapter III), signing a union authorization card was strongly related to attitude toward unions, union instrumentality, voting intention, and actual voting behavior. However, the other hypothesized personal characteristics did not reach significance. In addition, educational level and teaching in the professions were associated with attitude toward unions, union instrumentality, voting intention, and actual voting behavior, as was teaching in the arts area (with all except attitude toward unions).

Signing a union authorization card has been examined in only two previous studies (Getman et al., 1976; Zalesny, 1985). However, given the strong correlation of this variable with the other unionization process variables (ranging from .65 to .81, see Chapter IV) and the strong correlation reported by Getman and his associates between signing a union authorization card and voting behavior (.51), it seems warranted to conclude that signing a union authorization card should be examined in future union representation election investigations. As discussed in Chapter I, overseeing agencies (the NLRB and state public employee relations boards) order elections for determining union representation questions. However, under certain circumstances (e.g., employer unfair campaign practices) these overseeing agencies have decided that authorization card signatures will be accepted as reliable indices of employee preference and, as such, have ordered employers to bargain collectively with unions based on employees' authorization card signatures. Although a number of law review articles have questioned this practice (see Drotning, 1976; Lewis, 1974; Rains, 1967; Sandver, 1977), others have argued that this variable is a reliable indicator of representation preference (Eames, 1976; Spindel, 1968). Thus, although there remains a theoretical question regarding signing a union authorization card, key actors in the American industrial relations system believe that authorization card signatures are a reliable indicator of preference, and the results of this investigation (as further discussed below) strongly support this view. [Parenthetically, there is an ensuing debate regarding the effect of employer unfair campaign practices on the relationship between signing a union authorization card and prounion voting behavior; see Weiler (1983) and Goldberg, Getman, and Brett (1984) for a discussion of this issue.]

As mentioned above, educational level, teaching in the professions and the arts were also significantly related to the other unionization process variables. Although many previous studies do not support these findings (see Table 3), four studies also found a significant positive correlation between educational level and prounion attitudes (DeCotiis & LeLouarn, 1981; Duncan & Leigh, 1980; Ponak & Janz, 1984; Seeber, 1981). Also, as in this study, Ladd and Lipset (1973) and Muczyk et al. (1975) found a significant negative correlation between teaching in the professions and prounion sentiments. Finally, this study supports the Ladd and Lipset (1973) result regarding the significance of teaching in the arts.

The results of testing Hypothesis 2 (see Chapter IV) were strongly supportive. Trust in the employing organization's administration, economic job satisfaction, and noneconomic job satisfaction were each significantly associated with attitude toward unions, union instrumentality, voting intention, and voting behavior. In addition, general job satisfaction, organizational commitment, and job-related psychological stress were each significantly related with the above-mentioned dependent variables. These results are very much in agreement with the literature (see Table 4) and suggest that negative work context attitudes and high levels of stress are associated with prounion sentiments.

As hypothesized (see Hypotheses 3 through 5 in Chapter III) attitude toward unions, union instrumentality, voting intention, and voting behavior were each substantially correlated with the other. These results are strongly supported by the literature (see Table 4), and in particular by Getman et al. (1976). Consequently, it appears that either a general prounion or antiunion orientation will prevail in an individual's attitude toward unions, union instrumentality, voting intention, and voting behavior.

It also appears that the closer in time voting intent is assessed to actual voting behavior the higher the correlation. For example, Getman et al. (1976) examined voting intent from ten days to six months before an election and found a .73 correlation with voting behavior. Zalesny (1985) assessed voting intention one month before an election and reported a .83 correlation with actual vote. And, the present study examined voting intent six days before the election and found a .97 correlation with voting behavior. This pattern of closer-in-time-higher-correlation supports Ajzen and Fishbein (1977) regarding the view that the closer in time one's intended behavior is measured to the actual performance of the behavior, the more predictive is the intention. This raises the interesting question of how far before a representation election is held can the outcome be predicted by attitudinal, affective, and behavioral intent variables. Research on this issue would clearly be useful and interesting, to organizations, unions, and academics.

The chi-square results of reported voting behavior and actual election results (Hypothesis 6; see Chapter III) support previous studies in that there was no significant difference between the two. Consequently, it appears that the respondents accurately disclosed their voting behavior which, in turn, increases faith in the obtained results.

The simultaneous and stepwise regressions testing Hypotheses 7 through 9, and the suggested DeCotiis and LeLouarn (1981) hypothesis regarding attitude toward unions (see Chapters III and IV), indicated partial support. When union instrumentality was the dependent variable, the simultaneous regression results indicate that only attitude toward unions, teaching in the arts, and educational level are significant predictors. However, when stepwise regression was used, only attitude toward unions and educational level are significant predictors. Contrary to expectations, none of the work context variables were significant predictors of union instrumentality. However, the predictive ability of attitude toward unions is supported and congruent with the literature (Allen & Keaveny, 1981; Bigoness & Tosi, 1984; Getman et al., 1976; Kochan, 1979; Schriesheim, 1978; Youngblood et al., 1984). Also, the predictive ability of educational level is supportive of Kochan (1979) and others, and the significance of teaching in the arts as a predictor of union instrumentality supports the findings of Ladd and Lipset (1973).

Comparing the simultaneous and stepwise regression results when attitude toward unions is the dependent variable shows that when union instrumentality and all the personal characteristics and work context variables are entered into the equation, only union instrumentality and signing a union authorization card are significant predictors. However, the stepwise results show that union instrumentality, signing a union authorization card, and annual pay are significant predictors (noneconomic job satisfaction was also significant, but at $p \leq .10$). As in the case of union instrumentality, none of the work context variables were significant predictors of attitude toward unions. Signing a union authorization card was a predictor of attitude toward unions; this supports Getman et al. (1976). Union instrumentality predicted attitude toward unions, supporting Bigoness and Tosi (1984). Also, the finding that annual pay significantly predicts attitude toward unions is in agreement with the majority of previous union attitude and union election studies (see Table 3).

When voting intention was the dependent variable, the simultaneous regression results show that union instrumentality and four personal characteristics (signing a union authorization card, annual pay, and teaching in the professions and the arts) are significant predictors. However, the stepwise regression findings indicate that only union instrumentality, signing a union authorization card, and annual pay are significant ($p \leq .05$) predictors. The lack of significance for the work context variables was unexpected and deviates from most of the previous research findings of faculty attitudes toward unionization (Allen & Keaveny, 1981; Bigoness, 1978; Dayal, 1982; Feuille &

Blandin, 1974; Gomez-Mejia & Balkin, 1984; Hammer & Berman, 1981; Herman & Skinner, 1975; Ladd & Lipset, 1973; Muczyk et al., 1975; Walker & Lawler, 1979; Zalesney, 1985). However, the nonsignificant findings of the work context variables in a faculty setting are in agreement with Bigoness and Tosi (1984) and Lawler and Walker (1980). One possible explanation for this result is that the statistical effect of signing a union authorization card overwhelmed any possible work context effects.

That signing a union authorization card was a significant predictor of voting intent supports Getman et al. (1976), and the significance of teaching in the professions and the arts supports Ladd and Lipset (1973). Most of the previous research on attitude toward unions and union representation elections reported annual pay as significantly predicting voting intent, and this study supports these previous findings.

Finally, when all the union process variables were regressed on voting behavior, the simultaneous regression results show voting intention and economic job satisfaction as significant predictors. However, the stepwise regression findings indicate that voting intention, economic job satisfaction, number of years in current occupation, and organizational commitment made a significant contribution to the prediction of voting behavior. The significant contribution of voting intent and economic job satisfaction are strongly supported by the literature (see Chapter II) and the positive contribution of number of years in current occupation to the prediction of voting behavior agrees with many previous studies (see Table 3). However, organizational commitment as a significant predictor of voting behavior was somewhat unexpected, given the mixed results reported in the literature (see Table 3).

Comparing the simultaneous and stepwise regression prediction equations with either union instrumentality, attitude toward unions, voting intention, or voting behavior as the dependent variable suggests the importance (regardless of the data-analytic method) of the following variables: attitude toward unions; union instrumentality; voting intention; signing a union authorization card; educational level; annual pay; and economic job satisfaction. In addition, the simultaneous regressions add teaching in the professions and the arts as significant predictors. And, the stepwise regressions add number of years in current occupation and organizational commitment as significant predictors. As explained in Chapter III, assessing voting intention and voting behavior with OLS regressions is questionable. Thus, these hypotheses were also examined using discriminant analysis (see discussion below). Regressing the predictors on union instrumentality and attitude toward unions, however, is an acceptable statistical method since these dependent variables are continuous.

Summary

The hypothesis-tests of this investigation showed significant correlations between attitude toward unions and signing a union authorization card, educational level, teaching in the professions, trust in the employing organization's administration, economic and noneconomic job satisfaction, general job satisfaction, job-related psychological stress, union instrumentality, voting intention, and voting behavior. There were also significant correlations between union instrumentality, voting intention, and voting behavior with each of the following variables: signing a union authorization card; educational level; teaching in the professions and arts; trust in the employing organization's administration; economic, noneconomic, and general job satisfaction; and job-related psychological stress. These results suggest that public sector higher education faculty union attitudes are impacted upon by more than just job satisfaction issues; that trust, stress, teaching area, and union instrumentality are also important correlates of union attitudes. Additionally, signing a union authorization card is a highly significant correlate of other union sentiments and a variable that should be examined in future studies of the unionization process. Finally, attitude toward unions, union instrumentality, voting intention, and voting behavior are each significant correlates of the other, suggesting their importance in future examinations of higher education faculty union representation election voting behaviors.

The hypotheses that postulated significant predictors of attitude toward unions, union instrumentality, voting intention, and voting behavior were partially supported and showed that: union instrumentality predicted attitude toward unions; attitude toward unions predicted union instrumentality; union instrumentality predicted voting intention; and voting intention predicted voting behavior. Although the prediction of voting intention and voting behavior were further examined with discriminant analysis (see the discussion below) and the causal ordering of these variables was assessed using path analysis (see below), it appears that each of these variables is important in the unionization process. Finally, signing a union authorization card, educational level, annual pay, economic job satisfaction, teaching in the professions and the arts, number of years in the current occupation, and organizational commitment were significant personal characteristic and work context predictors of subsequent unionization process model variables (see Figure 5).

Interpretation of the Path Analyses

The four rival unionization process models depicted in Figure 6 (Models A_1, B_1, A_2 and B_2) were examined using the significant predictors uncovered in the stepwise regression analyses. As explained in Chapter IV, the four models were examined with both an unrestricted predictor set and a restricted predictor set. The results of these analyses supported the four causal models, but Models B_1 and B_2 resulted in the same variables and path coefficients regardless of the predictor set employed. Consequently, it was concluded that three of the four rival models are plausible for the union representation process--Models A_1, A_2, and B_1. Finally, further tests of the models (the average absolute differences between the actual and implied correlation matrices) resulted in the selection of Model B_1 as the best representation of the union representation election process for this study's community college faculty sample.

DeCotiis and LeLouarn (1981) and others (see Chapter II) have proposed that personal characteristics and work context variables, attitude toward unions, union instrumentality and voting intention should be included in a union representation process model. The results of this investigation support these variable inclusions. DeCotiis and LeLouarn (1981) also proposed a unionization process model (see Figure 4) which suggests that personal characteristics and work context variables are causally prior to union instrumentality, and that union instrumentality is causally prior to attitude toward unions, that attitude toward unions is causally prior to voting intent, and that voting intent is causally prior to voting behavior (Models A_1 and A_2). This study tested the DeCotiis and LeLouarn model as well as a alternative causal ordering of attitude toward unions and union instrumentality (Models B_1 and B_2). In particular, that attitude toward unions is causally prior to union instrumentality (see Figure 5). The path analytic results support the unionization process variables as proposed by DeCotiis and LeLouarn (1981), but the results do not support their proposition that union instrumentality is causally prior to attitude toward unions. Rather, the results of the present investigation clearly support this study's hypothesis that attitude toward unions is causally prior to union instrumentality (see Figure 7). Finally, of all the personal characteristics and work context variables examined, only signing a union authorization card and noneconomic job satisfaction resulted in significant path coefficients with attitude toward unions.

In discussing these results, it should be noted that path analysis is an important analytical tool for theory testing in field research, and that by testing the causal assumptions of a model against alternative causal assumptions, the viability of a model can be examined (Jermier & Schriesheim, 1978). Thus, the path analyses of the four rival unionization process models facilitated the identification of the causal model that was most consistent with the pattern of variable correlations among the community college faculty. However, it should be emphasized that path analysis does not allow the determination of cause-effect directionality from correlational data, only that it allows the identification of models with predictions that are most consistent with a study's data. Thus, while encouraging, this study's path analysis must be viewed as exploratory and requiring replication. Furthermore, the results of the Haitovsky's (1969) test of variable multicollinearity suggests that replication would be highly desirable due to potential path coefficient instability from excessive variable interdependence. Despite this, however, the path-analytic findings support the alternative unionization process model that was proposed (and tested) in the current study. Thus, contrary to DeCotiis and LeLouarn's (1981) hypothesis, attitude toward unions is causally prior to union instrumentality for the current community college faculty data.

Interpretation of Respondent Group Membership Classifications

Discriminant analysis was used to determine the best predictors of the respondents' group membership with respect to voting intention (Hypothesis 8) and voting behavior (Hypothesis 9). Using both the simultaneous and stepwise regression analysis results to select possible discriminators, the results clearly show the importance of union instrumentality, signing a union authorization card, and voting intention. And, in comparing both the simultaneous and stepwise regression results with the discriminant analyses results, the findings clearly show that regardless of the statistical analysis employed, union instrumentality and signing a union authorization card are the primary predictors/discriminators of voting intent, and that voting intention is the primary predictor/discriminator of voting behavior. These results support previous findings (Bigoness & Tosi, 1984; DeCotiis & LeLouarn, 1981; Getman et al., 1976; Youngblood et al., 1984; Zalesny, 1985). However, as noted in Chapter II, although Zalesny (1985) examined signing a union authorization card she did not report her findings. But, Getman et al. (1976) reported the significant contribution of signing a union authorization card in predicting voting intention and behavior. And, Bigoness and Tosi (1984) and DeCotiis and LeLouarn (1981) concluded that union instrumentality was the most significant predictor/ discriminator of both voting intention and voting behavior.

In addition to the above comparisons between the regression and discriminant analyses results, the discriminant functions yielded other significant predictors. Annual pay and psychological mobility also contributed to the group member classification of voting intention, as did organizational commitment and number of years in current occupation for voting behavior. These results are supported by previous empirical findings (see Chapter II).

In summary, the further testing of Hypotheses 8 and 9 by discriminant analysis led to the conclusion that for this sample of community college respondents, neither the regression analyses nor the discriminant analyses would have led to wrong theoretical conclusions regarding voting intention or voting behavior; the significant predictors were identical. That is, union instrumentality and signing a union authorization card were the main contributors to voting intention and voting intention was the main contributor to voting behavior.

Comparison of Data-Analytic Results

Correlation analysis, simultaneous and stepwise regression analyses, path analysis, and discriminant analysis were used in this study to examine the nine hypothesized relationships and the causal ordering of the unionization process variables. A comparison of the results for each data-analytic method shows a clear pattern of significant independent variables for each of the dependent variables of interest.

When attitude toward unions was the dependent variable of interest, the significant independent variables were: signing a union authorization card, noneconomic job satisfaction, and union instrumentality (correlation analysis); signing a union authorization card and union instrumentality (simultaneous regression analysis); signing a union authorization card, union instrumentality, and annual pay (stepwise regression analysis); and signing a union authorization card and noneconomic job satisfaction (path analysis). These findings clearly indicate the strong importance of signing a union authorization card across all statistical methods as a significant predictor of attitude toward unions.

When union instrumentality was the dependent variable of interest, the significant independent variables were:

attitude toward unions, educational level, and teaching in the arts (correlation analysis); attitude toward unions, educational level, and teaching in the arts (simultaneous regression analysis); attitude toward unions and educational level (stepwise regression analysis): and attitude toward unions (path analysis). These findings clearly show the substantial importance of attitude toward unions across all statistical methods as a significant predictor of union instrumentality perceptions.

When voting intention was the dependent variable of interest, the significant independent variables were: signing a union authorization card, attitude toward unions, union instrumentality, and teaching in the arts and the professions (correlation analysis); signing a union authorization card, union instrumentality, annual pay, and teaching in the arts and the professions (simultaneous regression analysis); signing a union authorization card, union instrumentality, annual pay, and psychological mobility (stepwise regression analysis): and signing a union authorization card, union instrumentality, annual pay, and psychological mobility (discriminant analysis). These findings clearly indicate the strong importance of signing a union authorization card and union instrumentality perceptions across all statistical methods as significant predictors of voting intention.

Finally, when voting behavior was the dependent variable of interest, the significant independent variables were: voting intention and economic job satisfaction (correlation analysis); voting intention and economic job satisfaction (simultaneous regression analysis); voting intention, economic job satisfaction, number of years in current occupation, and organizational commitment (stepwise regression analysis); and voting intention, economic job satisfaction, number of years in current occupation, and organizational commitment (discriminant analysis). These findings clearly show the substantial importance of voting intention and economic job satisfaction across all statistical methods as significant predictors of union representation election voting behavior.

Comparing across analyses, the results of this study clearly support the inclusion of specific variables in any future study of the union representation election process. In particular, variables which should be included are: signing a union authorization card; economic job satisfaction; attitude toward unions; union instrumentality perceptions; voting intention; and, of course, voting behavior. Variables that seem potentially worthy of future examination are: noneconomic job satisfaction; annual pay; educational level; faculty teaching area; psychological mobility; number of years in current occupation; and organizational commitment.

Limitations of Previous Unionization Process Studies

Many of the previous unionization process studies suffer from theoretical and/or methodological shortcomings which make their findings (and conclusions) questionable or of limited usefulness. In particular, such studies often examine a set of variables that is not fully adequate, no (or limited) information is given about the type of election, or type of sector, that is being studied, variables operationalization is often poor and, in any event, is not uniform across studies, and model causal inference is rarely assessed. Each of these limitations is discussed below.

Variables Adequacy

Reported correlations and/or R^2's are typically low in most unionization process studies (Bigoness, 1978; Bigoness & Tosi, 1984; DeCotiis & LeLouarn, 1981; Gomez-Mejia & Balkin, 1984; Schriesheim, 1978; Youngblood et al., 1984; Zalesny, 1985; to name a few). Consequently, little relevant information is learned about significant variables in the unionization process. One possible explanation for these poor results is that researchers have failed to examine signing a union authorization card, union instrumentality perceptions, and/or voting intention. When these variables are included in the examination of the unionization process (as is this study and that of Getman et al., 1976), correlations and R^2s are typically higher. Consequently, as discussed above, future research should include

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signing a union authorization card, union instrumentality, and voting intention in their assessment of the unionization process. The literature clearly supports the inclusion of these unionization process variables, as do the results of the present investigation.

Type of Election and Sector

Many researchers make no reference to the type of election that is being investigated. As discussed in Chapter I, there are many types of union representation elections; initial representation, rival union, decertification, run-off, and *Globe*, to name a few. In addition, many researchers do not indicate which sector (private or public) their sample is drawn from (see Table 1). Without this election and sector information the environmental (in particular, the legal environment) context of their study is unknown and can seriously limit the generalizability of the obtained results. Consequently, subsequent researchers are unable to replicate previous studies, which limits the usefulness of the research. Thus, future research should clearly explain the environmental context of the investigation.

Variable Operationalization

It appears that even when unionization process researchers agree upon the conceptual usefulness of including personal characteristics, work context variables, attitudes toward unions, union instrumentality perceptions, and voting intention in their investigations, there is little consistency in the operationalization of these variables across studies. As explained below, standardized measures with acceptable internal consistency reliabilities exist for job satisfaction, attitude toward unions, organizational commitment, and psychological job-related stress. However, many researchers fail to use these measures and, instead, create new (untested) measures to examine the above-mentioned variables. The problem with this approach is twofold: (1) results from different operationalizations may be noncomparable (due to differences in the operationalizations themselves); and (2) when ad-hoc measures are used, failure to find significant results can be due to measurement shortcomings alone. This, of course, makes it impossible to rule out a critical alternate explanation for nonsignificant study results, and, therefore, severly limits the usefulness of studies with ad-hoc measures.

Although job satisfaction findings from previous studies have been rather consistent, the operationalization of this work context variable has not been uniform. Allen and Keaveny (1981), Gomez-Mejia and Balkin (1984), Hammer and Berman (1981), and Schriesheim (1978) used the Minnesota Satisfaction Questionnaire (MSQ; Weiss et al., 1969), which contains economic and noneconomic job satisfaction subscales (see Chapter III). Bigoness (1978) and Odewahn and Petty

(1980) use the Job Descriptive Index (JDI; Smith, Kendall, & Hulin, 1969), which was designed to assess satisfaction with work, supervision, co-workers, pay, and promotion. Both the MSQ and the JDI have substantial validity and reliability data supporting their use (e.g., Dunham et al., 1977; Gillet & Schwab, 1975), and therefore appear to be adequate satisfaction measures. However, all of the other research which has examined job satisfaction has used relatively poor measures.

Zalesny (1985) used an unspecified number of items from Terborg, Swenson, and Falkenberg's (1982) job satisfaction scale and then developed and added an unspecified number of additional job satisfaction items (some based on telephone interviews and some were developed from an unknown source); no evidence of validity is given by Zalesny for her measure. Brett (1980), Getman et al. (1976), Hamner and Smith (1978), Herman and Skinner (1975), and Smith and Hopkins (1979) used interviews to develop their own job satisfaction instruments; again, no validity data are given. Dayal (1982), DeCotiis and LeLouarn (1981), Feuille and Blandin (1974), Gordan and Long (1981), Hills, (1985), Kleingartner (1973), Kochan (1979), Marin (1984), Maxey and Mohrman (1980), and Muczyk et al. (1975) did not even identify the source of their job satisfaction measure, no less speak of instrument quality. Finally, each of the three studies that tested unionization process models (reviewed in Chapter II) included job satisfaction among the work context variables they examined. None of these studies, however, used the MSQ or the JDI, or any other well-established job satisfaction measure.

Attitude toward unions has been operationalized as: a multiplicative function of the perceived probability that voting for a union will lead to a particular consequence (Brief & Rude, 1981); a multi-facted additive function of habit, intention, psychological arousal, and facilitating conditions (Zalesny, 1985); and as a veto mechanism that will over-ride instrumentality perceptions and job satisfaction (Youngblood et al., 1984). Although Uphoff and Dunnette (1956) created a carefully-developed 20-item general attitude toward unions scale that has been shown to have acceptable reliability and validity (see Chapter III) it has been used in only five of the unionization process studies since 1972 (Bigoness & Tosi, 1984; Gordon & Long, 1981; Gordon et al., 1980; Ponak & Janz, 1984; Schriesheim, 1978); all of the other studies used ad-hoc measures. None of these have demonstrated adequate validity evidence, and none has been shown to be comparable to any of the others. [Parenthetically, DeCotiis and LeLouarn (1981) stressed the importance of attitude toward unions but never measured it.]

Organizational commitment has also been operationalized in numerous ways even though a standardized measure of organizational commitment, with acceptable reliability and validity, exists (Porter et al., 1974). Gordon et al. (1980) and Smith and Hopkins (1979) indicated that they

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created their own organizational commitment measure, but no mention was made of the dimensions underlying the variable. Walker and Lawler (1979) indicated that organizational commitment was a composite index of an individual's organizational tenure and position (i.e., faculty rank), where the longer the tenure and the higher the position, the greater the organizational commitment. Lawler and Walker (1980) indicated that organizational commitment was a surrogate for organizational tenure, where tenured employees (faculty) were committed and nontenured employees were not committed. And, two studies did not identify the instrument used to examined organizational commitment (DeCotiis & LeLouarn, 1981; Martin, 1984). None of these nonstandardized measure were shown to have validity evidence. Only Bigoness and Tosi (1984) used the Porter et al. (1974) measure of organizational commitment.

Finally, as discussed in Chapter II, Spielberger and his associates (1970) developed a measure of psychological job-related stress that has been found to be valid and reliable. However, of the studies that examined stress effects (see Table 4), none of the researchers used this standardized measure. Odewahn and Petty (1980) measured stress with the Rizzo, House, and Lirtzman (1970) 27-item role stress scale. Fukami and Larson (1984) indicated that they created their own job-related stress measure from an unspecified number of items from Parasuraman (1978) and from Kahn, Wolfe, Quinn, Snoek, and Rosenthal (1984); no evidence of validity was given. And, DeCotiis and LeLouarn (1981) did not disclose the measure they used to assess stress.

In summary, poor and inconsistent variable operationalizations make the comparison of results across studies next to impossible. It also raises serious concerns about measurement shortcomings as an alternative explanation for nonsignificant results. It is suggested that future researchers use established measures to examine unionization process variables (where they exist), to enhance the additivity of results and to reduce the plausibility of inadequate measurement as an alternate explanation for nonsignificant results.

Causal Inference

As discussed in previous chapters, there appears to be disagreement about the unionization process. Four unionization process models were reviewed in Chapter II and, in general, all four models agree that behavioral intent will cause actual voting behavior. However, DeCotiis and LeLouarn (1981) suggest that union instrumentality causes attitude toward unions, Zalesny (1985) proposes that attitude toward unions causes union instrumentality, Youngblood et al. (1984) postulates that union instrumentality has an augmenting function with work context, and Brief and Rude (1981) suggest that attitude toward unions, union instrumentality perceptions, and work context form an additive function which will cause behavioral intent. Of the three models that have been empirically tested (DeCotiis & LeLouarn, 1981; Youngblood et al., 1984; Zalesny, 1985) only Youngblood et al. used causal/structural analysis to test the causal ordering of their model. However, Youngblood et al. (1984) tested no rival causal models and, as discussed in Chapter II, this author questions whether this model is really a model and not just a conglomeration of variables. In addition, other unionization process researchers who do not test or propose causal models often speak in causal terms even with only concurrent bivariate correlation results. If researchers *imply* causal processes, they should test for causation with path analysis or some other acceptable statistical method. Thus, it is strongly suggested that future unionization researchers assess the causal order implied by or inherent in their models, to assist researchers in better understanding the unionization process.

Limitations of the Present Study and Future Research Directions

The present study suffers from various limitations (as do most). In particular, the generalizability of the findings needs to be addressed by replication at other higher education institutions. There may also be a problem with common source and common method variance causing spurous relationships in the study. However, the multiple analyses employed herein lessens the plausibility of this alternate explanation of the obtained results. So does the fact that the results of this study are in strong agreement with many previous studies. Finally, the relatively small sample size of this study is an obvious shortcoming. A larger sample (or multiple samples) would have increased the reliability (and generalizability) of the obtained results.

As discussed above, future research needs to: increase the generalizability of results; include signing a union authorization card, union instrumentality perceptions, and voting intention as variables in the examination of the unionization process; identify the type of election and the type of sector where the sample(s) is(are) drawn; use consistent, standardized variable operationalizations; and examine union process model causal inferences. The results of the present investigation, combined with the unionization process literature (see Chapter II), suggest a clear future research design. Specifically, a longitudinal, repeated measures, field study of the unionization process is called for (see Figure 8).

As outlined in Chapter I, the American industrial relations system encompasses four phases in the union representation process: (1) organizing; (2) campaign (by both the employer and the union); (3) election; and (4) post-election. The culmination of the organizing phase is the securing of authorization card signatures by the organizing union (typically more than 30 percent) and the presentation of these cards to the overseeing agency. Many employees, once they have either signed or not signed the

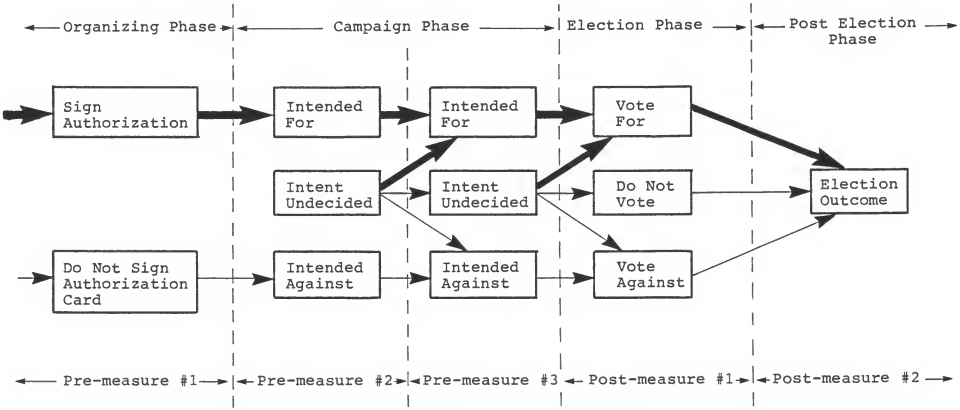


Figure 8. A Longitudinal, Repeated Measures, Field Study of the Unionization Process.

authorization cards, have an intended election voting behavior at this time. Here begins the campaign phase. As discussed in Chapter II, the closer in time a behavioral intention is to the performance of the actual behavior, the stronger will be the relationship between the intention and the behavior (Ajzen & Fishbein, 1977). Also, as discussed above, the studies of Getman et al. (1976), Zalensy (1985), and the current investigation (take together) support the Ajzen and Fishbein (1977) hypothesis. Consequently, intended voting behavior could change over the course of the campaigning phase, suggesting the need for more than one measurement during this phase. Finally, during the election phase the bargaining unit employees actually vote in the representation election, and during the post-election phase the actual election results become known and are certified by the overseeing agency.

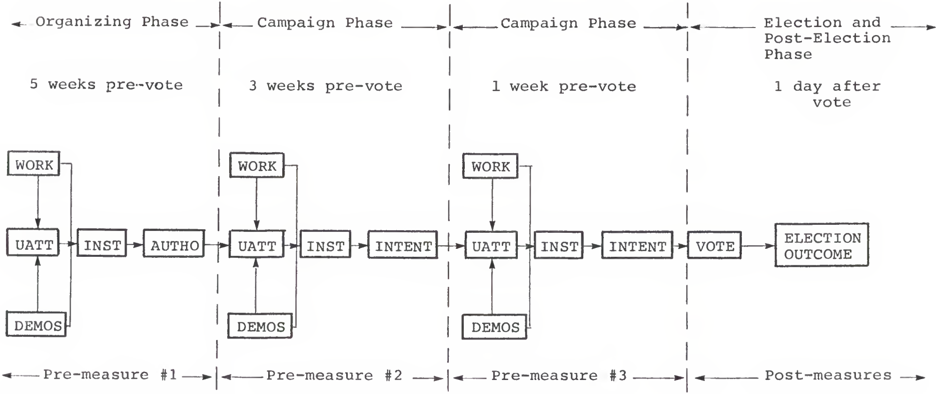
As shown in Figure 8, four distinct phases can thus be visualized as existing in the unionization process: (1) an organizing phase (authorization cards); (2) a campaign phase (voting intention either for the union, against the union, or undecided); (3) an election phase (actual vote for the union, against the union, or not voting); and (4) a post-election phase (actual election results). This figure also proposes that three pre-measures (one during the organizing phase and two during the campaign phase) and two post-measures (one immediately after the election and one after the election results are known) would be most useful in conducting research in this domain.

As also shown in Figure 8, the organizing union would be most interested in examining the bold lines and arrows. In other words, a union would want to assess: (1) why employees sign a union authorization card; (2) why employees intend to vote prounion at the beginning of the campaigning phase; (3) why employees intend to vote prounion at the end of the campaign phase; (4) why employees actually vote prounion; and (5) are the proceeding answers reflected in the actual election results. Also, unions would probably want to examine why employees change from an undecided voting intention to either an intended prounion vote or an actual prounion vote.

Finally, as also shown in Figure 8, the employing organization would probably be most interested in the other lines and arrows in the lower portion of the figure. That is, an employing organization would probably want to examine: (1) why employees do not sign a union authorization card; (2) why employees intend to vote antiunion at the beginning of the campaign phase; (3) why employees intend to vote antiunion at the end of the campaign phase; (4) why employees actually vote antiunion; and (5) are the preceding answers reflected in the actual election results. Also the employing organization would probably want to examine why employees change from an undecided voting intention to either an intended antiunion vote or an actual antiunion vote.

Given the foregoing discussion about the unionization process and the schematic diagram in Figure 8, it seems plausible to propose a more comprehensive operational model of the unionization process (see the earlier models presented in Figure 6). The results of this study strongly suggest the inclusion of the personal characteristic of signing a union authorization card in any future study of the unionization process. And, this conclusion is supported by Getman et al. (1976). Moreover, the present investigation found that other personal characteristics (see Chapter IV), as well as work context attitudes, attitudes toward unions, union instrumentality perceptions, and intended voting behavior should be included in future union representation election voting behavior studies.

Figure 9 shows the expanded new proposed model. It specifies that the following variables be examined with the first pre-measure: work context attitudes; personal characteristics; attitude toward unions; union instrumentality perceptions; and signing a union authorization card. During the campaign phase, both the second and the third pre-measures assess: work context attitudes; personal characteristics; attitude toward unions; union instrumentality perceptions; and voting intention. Finally, the first post-measure is to examine the reported voting behavior and



where:

Work = Work Context.
Demos = Personal Characteristics.
Uatt = Attitude Toward Unions.
Inst = Perceived Union Instrumentality.
Autho = Authorization Card Behavior.
Intent = Intended voting behavior.
Vote = Actual Voting Behavior.

Figure 9. Proposed Longitudinal, Repeated Measures, Field Study of the Unionization Process Model.

the second post-measure is to obtain the actual, certified election results.

This unionization process model incorporates the four phases (organizing, campaign, election, and post-election) of Figure 8. Figure 9 further proposes that the first pre-measure (organizing phase) be distributed five weeks before the scheduled election. Also, that the second pre-measure (beginning of the campaigning phase) be distributed three weeks before the election, that the third pre-measure (end of the campaign phase) be distributed one week before the election, that the first post-measure be distributed the day after the election (before the election results are known), and that the second post-measure be gathered as soon as the election results are certified by the overseeing agency involved.

These proposed times of measurement derive from the fact that the final gathering of authorization card signatures typically occurs just a few weeks before an election order is made by the overseeing agency, and that an election order is usually tendered one month before the scheduled election. Also, it seems preferable to survey the respondents before the actual election results are known, so that assessing actual vote one day after the election seems logical.

Given the unionization process literature that was discussed in Chapter II and the results of the present investigation (as well as the limitations of previous studies and this study), it is proposed that the more developed unionization process model shown in Figure 9 will allow better future research on the union representation process. Additionally, it is proposed that the testing of this model should follow the data-analytic methods that were used in the present investigation. That is, correlation analysis, simultaneous and stepwise regression analysis, path analysis, and discriminant analysis. Finally, if possible, logistic regression analysis should also be employed.

Summary

The results of the present study were discussed, along with the limitations of previous studies and the limitations of the present study, as well as suggestions for future research. In addition, a new, more comprehensive longitudinal model of the union representation process was proposed to guide future data collections and empirical investigations.

The results of the present study suggest that the community college faculty findings are not artifacts and are probably generalizable to other higher education settings. Also, signing a union authorization card, economic job satisfaction, attitude toward unions, union instrumentality perceptions, and voting intention should all be included in future studies of union representation election voting behavior. Of the four rival unionization process models that were examined with path analysis, Model B_1 was most clearly supported. This model suggests that noneconomic job satisfaction and signing a union authorization card each lead to attitude toward unions, that attitude toward unions is causally prior to union instrumentality, and that instrumentality leads to vote intent (which leads to voting behavior).

APPENDIX A

SURVEY INFORMATION LETTER

April 4, 198__

Professor ____________________
______________ Community College
____
____

Dear Professor ________________

On April 6th, I will be mailing you a survey that deals with faculty attitudes concerning the April 13th union representation election at _____________ Community College. This survey is being undertaken independently of both the union and the College's administration, and it is not sponsored by either. This is to insure an "impartial" and "unbiased" frame of reference.

Although you undoubtedly have been "subjected" to many surveys over the years, this one is very different and I believe that it is worth your time and effort. While the data that I hope you will provide will form a major part of my doctoral dissertation at the University of Florida, there are two other reasons for participating in the survey. First, this study represents the first empirical investigation of factors influencing faculty attitudes about union representation voting; although studies of the voting process have been undertaken in other domains, faculty representation is a unique process and knowledge in this area is woefully inadequate. Second, and of more immediate and direct concern to you, the information that you provide will highlight your wants, attitudes, and feelings as a __________ faculty member to an impartial "outside" researcher. I fully expect that the results of my survey study will be requested by both the union and the administration, so that positive actions can be taken to improve your job situation no matter what the outcome of the representation election. Thus, your participation in the survey will (1) help me complete my doctorate, (2) aid in the development of knowledge in an important area in employee-union-management relations, and (3) provide information that will be useful in enhancing your job situation.

The survey that I will mail you should take approximately a half-hour to complete. Although this might seem a bit long, the survey is an in-depth one, designed to yield specific information useful for research, the union, and the College's administration. The data analyses will involve aggregated faculty responses only--to paint a picture of overall faculty feelings. No individual participant will be identified, and your responses will be completely confidential (in fact, you will be asked to not write your name on the survey). Thus, although the survey will involve some time commitment from you, there are no personal risks involved, and the benefits from participation are several. I therefore hope that you will complete the survey when you receive it, and return it to me prior to the representation election.

Again, I believe that your participation in the survey will be most worthwhile, and I hope that you will complete the survey and participate. In any event, I do wish you the very best for the future.

Sincerely,

Kathleen J. Powers
Research Director

P.S. A postcard will be included with the survey for you to indicate if you'd like a copy of the survey's results. Please note that you should return this separately from the survey (to prevent your identification), and that you may request a copy of the results whether you complete the survey or not. Obviously, I hope that you will complete the survey, but you may obtain the results nonetheless.

APPENDIX B

SURVEY TRANSMITTAL LETTER

April 4, 198__

Dear _________ Community College Faculty Member:

Today you should have received a letter from me informing you about the survey I am conducting. A copy of that survey is enclosed.

In my earlier letter I noted that the survey is independent of both the College's administration and the union, and that this research is not sponsored by either. I have discussed my study with the administration (President __________) and the Union (Dr. __________ and others), but am conducting it independently, without assistance or endorsement by either group.

As I noted in my earlier letter, this study will form a major part of my dissertation at the University of Florida, enhance knowledge about academic union representation elections, and, hopefully, enable you to communicate your feelings to the administration and the union. Perhaps this later point is bothersome to some of you, since I have received several telephone calls today inquiring about the survey and its sponsorship. Let me reiterate briefly that your individual responses will remain completely confidential and that only aggregate (averaged) responses of all faculty who participate in the survey will be made available to interested faculty members (I expect this will include members of the administration and the union). Again, your specific responses will not be made available to anyone. Operating under the Code of Ethics of the American Psychological Association and the Academy of Management precludes this, and my dissertation advisers and myself can assure you that your responses will remain completely confidential.

Again, whether the union wins or loses, I believe that the results of this survey will be beneficial to you in highlighting your concerns to both the administration and the union. Since only a small amount of your time is called for, won't you please take a few minutes and complete the enclosed survey questionnaire?

I thank you for your participation and wish you continued professional success.

Sincerely,

Kathleen J. Powers
Research Director

P.S. If you have any questions concerning this study, please do not hesitate to call me and ask; you do not have to identify yourself. My office phone is 392-0163, Thanks.

APPENDIX C

ATTITUDE SURVEY OF COMMUNITY COLLEGE FACULTY

(Mailed April 6, 198__)

MATCHING CODE

____

ATTITUDE SURVEY

OF

COMMUNITY COLLEGE FACULTY

KATHLEEN J. POWERS
THE UNIVERSITY OF FLORIDA

April 6, 198__

Dear __________ Community College Faculty Member:

Most people have opinions about their jobs and the organizations in which they work. Yet little is known about these opinions and how they relate to union representation. As a part of a research project being conducted for the completion of a doctoral degree, I would like to know how you feel about your job, _____________ Community College, and the upcoming union representation election (to be held April 13, 198__).

To do this, we have a number of questions which ask for your personal opinion about job related and union related matters. These questions were not designed to be tricky or difficult. There are no right or wrong answers and they are not a test . . . they will not be used to evaluate you. Your answers are for research purposes only and they will be kept strictly confidential by the University of Florida researcher(s) involved in the study. It should be emphasized that this study was not suggested, endorsed, or funded by any employee, employee group, union, or employer group. It was undertaken because of the researchers' interest in union representation elections in the academic environment. Although no one at ___________ or the organizing union will ever see your answers, we have designed this questionnaire so that individuals cannot be identified. For this reason, please do not put your name on the questionnaire.

The information provided by your answers will be analyzed by University researchers and if requested will be presented in summary form to any ___________ faculty member; this is to ensure that no individual can be identified. We researchers would like to know some biographical items (age, years on the job, etc.), but this is only so that we can make some comparisons for our own information. Once again, please do not put your name on this questionnaire.

Since a second part of this questionnaire will be given out in a few weeks, for computer analysis we need a basis for matching the two questionnaires which does not identify you. There are a number of ways we could try to do this. We could, for example, ask you to give your Social Security number on both questionnaires. While this would allow us to match the questionnaires quite easily, it would also identify you, which we do not want to do. In order to match the questionnaires and not identify you we ask you to do one of two things: (1) write the last four digits (numbers) of your home telephone number and some letter (e.g., A, Z, E, etc.) in the upper right hand corner on the front page of this questionnaire; (2) write some random four digit number and some letter in the upper right hand corner on the front page of this questionnaire. Regardless of the method you choose, the questionnaires can later be matched and your identity will remain unknown. So that you will not forget what number you provided for questionnaire matching purposes, enclosed you will find two plain white stickers . . . please record the numbers and letter you used on these and put them in a safe location. These stickers will be used for the later questionnaire.

Once you have completed the questionnaire, please put it in the large white pre-addressed and pre-stamped envelope provided, seal it, and mail it to the person indicated on the envelope. The envelopes will be opened at the University of Florida by the researchers and no one at __________ or the organizing union will see your answers. Your questionnaire responses will be kept completely confidential.

The summary results of this questionnaire will be made available to all interested ________ Community College faculty after the second questionnaire is given out and analyzed.

In advance I would like to thank you for participating in the study.

Sincerely,

Kathleen J. Powers
Research Director

BACKGROUND INFORMATION

Below are some questions concerning personal and job characteristics and feelings which will provide background information for the study. Please answer each question . . . do not omit any.

1. Sex (check one): ____1. Male _____2. Female

2. Race (check one): _____1. White _____2. Black

____3. Hispanic _____4. American Indian

_____5. Oriental _____6. Other

3. Marital Status (check one): _____1. Married

_____2. Separated _____3. Divorced

_____4. Widowed _____5. Single, never married

4. Number of dependents (check one): ____0 ____1 ____2

____3 ____4 ____5 ____6 ____7

____8 or more

5. What is your age in years? (check one):

___0. less than 25 ___1. 25 to 30

___2. 31 to 35 ___3. 36 to 40

___4. 41 to 45 ___5. 46 to 50

___6. 51 to 55 ___7. 56 to 60

___8. 60 or more

For questions #6 through #8 below, please use the following response choices:

1. Less than 6 months
2. 6 months to less than 1 year
3. 1 year to less than 5 years
4. 5 years to less than 7 years
5. 7 years to less than 10 years
6. 10 years to less than 15 years
7. 15 years to less than 20 years
8. 20 years and more

6. How long have you been employed by __________ Community College? ______

7. How long have you been working in your present occupational field? ______

8. How long have you been teaching? ______

9. Are you a tenured faculty member? (check one)

_____1. Yes _____2. No

10. What is the highest level of education you have completed? (check one)

___1. High School Diploma

___2. Two years college or technical school degree

___3. More than two years college

___4. Bachelor's Degree (B.A., B.S., etc.)

___5. Graduate education, no degree

___6. Graduate Degree (M.S., M.A., J.D., etc.)

___7. More than a Master's Degree

___8. Doctoral Degree (Ph.D., Ed.D., etc.)

11-12. What area is your last degree in? (check one)

___01. Humanities

___02. Education

___03. Business

___04. History

___05. English

___06. Physical Science

___07. Medical

___08. Legal

___09. Biological Science

___10. Foreign Language

___11. Social Science

___12. Vocational, please specify ________________

____

___13. Other, please specify ________________

____

13-14. What is your main instructional program area? (check one)

Division of Arts & Sciences

____01. Biological Sciences

____02. Creative Arts

____03. English

____04. Historical Studies

____05. Humanities

____06. Mathematics

____07. Personal Growth and Development

____08. Physical Sciences

____09. Social Sciences

____10. Cooperative Education

____11. Learning Laboratory

____12. Military Science

____13. Aerospace

____14. Women's Studies

____15. Other

Division of Vocational Education

____16. Business

____17. Cardiopulmonary

____18. Health Related

____19. Trade and Industrial

____20. Technical Program

____21. Public Service

____22. Home Economics

____23. Agribusiness and Resources

____24. Career Associate in Special Education

____25. Human Service

____26. Recreation Leadership

____27. Other

15. What is your current yearly academic salary? (check one)

___0. less than 10,000

___1. 10,000 to 13,999

___2. 14,000 to 17,999

___3. 18,000 to 21,999

___4. 22,000 to 25,999

___5. 26,000 to 29,999

___6. 30,000 to 33,999

___7. 34,000 to 37,999

___8. 38,000 or more

16-20. In which of the following unions are you currently a member? (check all that apply; do not check #18 below if you are an association member for non-bargaining purposes)

___16. UFF-NEA

___17. Teamsters

___18. Other "academic" union (e.g., NEA, AAUP, AFT, etc.)

___19. Other Union

___20. I am currently not a member of any union

21-23. Which of the following unions were you once (but no longer) a member of? (Check all that apply; do not check #21 if you were an association member for non-bargaining purposes).

___21. Some "academic" union (e.g., NEA, AAUP, AFT, UFF, etc.)

___22. Teamsters

___23. Other Union

24. Are any of your family members now, or have they ever been, a union member? ___1. Yes ___2. No

25-30. If you answered YES to question #24 above, which family members now belong, or belonged in the past, to a union? (check all that apply)

___25. Father

___26. Mother

___27. Sister(s)

___28. Brother(s)

___29. Spouse

___30. Children

31-33. If you answered YES to question #24 above, which of the following unions did your family member(s) belong to? (check all that apply)

___31. Some "academic" union (e.g., NEA, AAUP, AFT, UFF, etc.)

___32. Teamsters

___33. Other Union

34. Did you sign an authorization card for the upcoming ______________ union representation election?

____1. Yes

____2. No

35. Have you ever had the opportunity to vote in a union representation election before?

____1. Yes

____2. No

36. If you answered YES to question #35 above, how did you vote in a past union representation election?

____1. For the union

____2. Against the union

____3. I don't remember

____4. I did not vote

For questions #37 through #39 below, please use the following response choices:

1. Completely Distrust
2. Distrust
3. Distrust Somewhat
4. Trust as much as Distrust
5. Trust Somewhat
6. Trust
7. Completely Trust

---

37. To what extend do you trust the Board of Regents? _____

38. To what extent do you trust the ____________ administration? _____

39. To what extent do you trust your department's administration? _____

HOW I FEEL ABOUT WORKING FOR __________

Listed below are a series of statements that represent possible feelings that individuals might have about the organization or college for which they work. With respect to your own feelings about the particular community college for which you are now working . . . _____________ Community College . . . please indicate the degree of your agreement or disagreement with each statement that follows. Please answer each statement . . . do not omit any.

Please circle the appropriate response choice for each statement below:

1 = Strongly Disagree
2 = Disagree
3 = Neither Agree Nor Disagree
4 = Agree
5 = Strongly Agree

40. I am willing to put in a great deal of effort beyond that normally expected in order to help this college be successful............................ 1 2 3 4 5

41. I talk up this college to my friends as a great college to work for.............. 1 2 3 4 5

42. I feel very little loyalty to this college.................................. 1 2 3 4 5

43. I would accept almost any type job assignment in order to keep working for this college............................ 1 2 3 4 5

44. I find that my values and the college's values are very similar.................. 1 2 3 4 5

45. I am proud to tell others that I am part of this college......................... 1 2 3 4 5

46. I could just as well be working for a different college as long as the type of work were similar..................... 1 2 3 4 5

47. This college really inspires the very best in me in the way of job performance.................................... 1 2 3 4 5

48. It would take very little change in my present circumstances to cause me to leave this college...................... 1 2 3 4 5

1 = Strongly Disagree
2 = Disagree
3 = Neither Agree Nor Disagree
4 = Agree
5 = Strongly Agree

49. I am extremely glad that I chose this college to work for, over others I was considering at the time I joined......... 1 2 3 4 5

50. There's not too much to be gained by sticking with this college indefinitely.. 1 2 3 4 5

51. Often, I find it difficult to agree with this college's policies on important matters relating to its faculty.......... 1 2 3 4 5

52. I really care about the fate of this college................................ 1 2 3 4 5

53. For me this is the best of all possible colleges for which to work............... 1 2 3 4 5

54. Deciding to work for this college was a definite mistake on my part.............. 1 2 3 4 5

JOB FEELINGS

Below are a number of statements which people have used to describe themselves in relation to their job. Read each statement and then circle the appropriate number to the right of each statement to indicate how you GENERALLY feel on your job. There are no right or wrong answers. Do not spend too much time on any one statement but give the answer which seems to describe how you GENERALLY feel on your job. Please answer each statement . . . do not omit any.

Please circle the appropriate response choice for each statement below:

1 = Not At all
2 = Somewhat
3 = Moderately So
4 = Very Much So

1. I feel calm..............................1 2 3 4

2. I feel secure........................... 1 2 3 4

3. I am tense.............................. 1 2 3 4

4. I am regretful.......................... 1 2 3 4

1 = Not At all
2 = Somewhat
3 = Moderately So
4 = Very Much So

5. I feel at ease........................... 1 2 3 4

6. I feel upset............................. 1 2 3 4

7. I worry over possible misfortunes........ 1 2 3 4

8. I feel rested............................ 1 2 3 4

9. I feel anxious........................... 1 2 3 4

10. I feel comfortable....................... 1 2 3 4

11. I feel self-confident.................... 1 2 3 4

12. I feel nervous........................... 1 2 3 4

13. I feel jittery........................... 1 2 3 4

14. I feel "high-strung"..................... 1 2 3 4

15. I am relaxed............................. 1 2 3 4

16. I feel content........................... 1 2 3 4

17. I am worried............................. 1 2 3 4

18. I feel over-excited and "rattled"........ 1 2 3 4

19. I feel joyful............................ 1 2 3 4

20. I feel pleasant.......................... 1 2 3 4

JOB SATISFACTION

The purpose of this section is for you to describe how satisfied you are with various aspects of your job. For each statement below, use the following response choices:

---

5 = Very Satisfied (e.g., your job gives you more than you expected)
4 = Satisfied (e.g., your job gives you what you expected)
3 = Neither Satisfied nor Dissatisfied (e.g., you cannot make up your mind whether or not the job gives you what you expected)
2 = Dissatisfied (e.g., your job gives you less than you expected)
1 = Very Dissatisfied (e.g., your job gives you much less than you expected)

Remember: Keep the statement in mind when deciding how satisfied you feel about that aspect of your job. Then from the choice responses above, circle your response choice. Please answer each statement . . . do not omit any.

21. The chance to try out some of my own ideas.................................... 5 4 3 2 1

22. The chance to work my myself............ 5 4 3 2 1

23. The variety in my work.................. 5 4 3 2 1

24. The policies and practices toward faculty of this college.................. 5 4 3 2 1

25. My job security......................... 5 4 3 2 1

26. The amount of pay for the work I do...... 5 4 3 2 1

27. The working conditions (heating, lighting, ventilation, etc.) on this job...... 5 4 3 2 1

28. Being able to see the results of the work I do................................ 5 4 3 2 1

29. The chance to do new and original things on my own........................ 5 4 3 2 1

30. The chance to work alone on the job...... 5 4 3 2 1

31. The chance to do different things from time to time........................ 5 4 3 2 1

32. College policies and the way they are administered............................ 5 4 3 2 1

5 = Very Satisfied
4 = Satisfied
3 = Neither Satisfied nor Dissatisfied
2 = Dissatisfied
1 = Very Dissatisfied

33. The way my job provides for a secure future.................................. 5 4 3 2 1

34. The chance to make as much money as my friends................................. 5 4 3 2 1

35. The physical surroundings where I work... 5 4 3 2 1

36. Being able to take pride in a job well done.................................... 5 4 3 2 1

37. The chance to try something different.... 5 4 3 2 1

38. The chance to be alone on the job........ 5 4 3 2 1

39. The routine in my work................... 5 4 3 2 1

40. The way faculty are informed about college policies......................... 5 4 3 2 1

41. The way my job provides for steady employment.............................. 5 4 3 2 1

42. How my pay compares with that for similar jobs in other community colleges................................ 5 4 3 2 1

43. The pleasantness of the working conditions.................................. 5 4 3 2 1

44. Being able to do something worthwhile.... 5 4 3 2 1

45. The chance to develop new and better ways to do the job...................... 5 4 3 2 1

46. The chance to work independently of others.................................. 5 4 3 2 1

47. The chance to do something different every day................................ 5 4 3 2 1

48. The way college policies are put into practice................................ 5 4 3 2 1

49. How steady my job is..................... 5 4 3 2 1

50. My pay and the amount of work I do....... 5 4 3 2 1

5 = Very Satisfied
4 = Satisfied
3 = Neither Satisfied nor Dissatisfied
2 = Dissatisfied
1 = Very Dissatisfied

51.	The physical working conditions of the job....................................	5	4	3	2	1
52.	The chance to do my best at all times....	5	4	3	2	1
53.	The chance to try my own methods of doing the job...........................	5	4	3	2	1
54.	The chance to work away from others......	5	4	3	2	1
55.	The chance to do many different things on the job..............................	5	4	3	2	1
56.	The way the college treats it faculty....	5	4	3	2	1
57.	The way layoffs and transfers are avoided in my job.......................	5	4	3	2	1
58.	How my pay compares with that of other faculty..................................	5	4	3	2	1
59.	The working conditions..................	5	4	3	2	1
60.	The feeling of accomplishment I get from the job............................	5	4	3	2	1

JOB MOBILITY

The purpose of this section is to give you a chance to tell how mobile you feel with respect to your job (e.g., how easy you feel it would be to obtain a similar job elsewhere). Read each question carefully. Then, THINK about how much each question applies to your job mobility. Finally, check the response you feel most closely indicates your job mobility. Please answer each question . . . do not omit any.

1. How useful is your knowledge and ability on your present job to other employers? (check one)

___1. Not at all ___2. Slightly ___3. Somewhat

___4. Very ___5. Completely

2. How likely is it that you can leave your job at _______ and get one like it with another college? (check one)

___1. Not at all ___2. Slightly ___3. Somewhat

___4. Likely ___5. Very Likely

3. How useful is the knowledge you get on this job to you if you were to look for a job in another college? (check one)

___1. Very ___2. Quite a bit ___3. Somewhat

___4. Little ___5. Not at all

4. Which of the following is closest to your attitude about staying with ___________? (check one)

___1. I would not consider leaving under any circumstances

___2. I would leave for a promotion and a 20% increase in pay

___3. I would leave for the same kind of job and a 20% increase in pay

___4. I would leave for the same kind of job with the same pay but more challenge

___5. I would leave for the same kind of job and the same pay

5. What are your plans to stay with ________? (check one)

___1. I expect to leave as soon as possible

___2. I will leave if something better turns up

___3. I would leave only for an exceptional opportunity

___4. I would like to stay here all my working life

6. How would you feel if you heard (or read about) someone criticizing _________ or comparing ________ unfavorably to other community colleges? (check one)

___1. It would not really bother me at all

___2. It would bother me slightly

___3. It would bother me somewhat

___4. It would bother me very much

7. How much pride do you have in working for ___________? (check one)

___1. Very high ___2. High ___3. Moderate

___4. Low ___5. Very low

8. To what extent is your social life connected with your job? (check one)

___1. Very Large ___2. Large ___3. Somewhat

___4. Slightly ___5. Not at all

9. The number of people in ____________ I see socially at least once a month is. (check one)

___1. Zero to two (0-2)

___2. Three to five (3-5)

___3. Six to nine (6-9)

___4. Ten to thirteen (10-13)

___5. Fourteen or more (14+)

FEELINGS TOWARD UNIONS

The purpose of this section is to give you a chance to tell how you feel about unions in general. Read each statement carefully. Then, THINK about how strongly you agree or disagree with the statement. Finally, select one of the response choices that most closely indicates your feelings. Please answer each statement . . . do not omit any.

Please circle the appropriate response choice for each statement below:

1 = Strongly Agree
2 = Agree
3 = Undecided
4 = Disagree
5 = Strongly Disagree

10. If it were not for unions, we'd have little protection against favoritism on the job.............................. 1 2 3 4 5

11. I think the best person should be kept on the job regardless of seniority....... 1 2 3 4 5

12. Unions impose too many restrictions on employers................................ 1 2 3 4 5

13. Charges of "racketeering" in unions are greatly exaggerated...................... 1 2 3 4 5

14. Employees of a firm have better wages and working conditions when all of them belong to unions......................... 1 2 3 4 5

15. Unions should have something to say about whom the employer hires............ 1 2 3 4 5

16. A nonunion shop usually pays lower wages than a union shop.................. 1 2 3 4 5

17. Union rules often interfere with the efficient running of the employer's business................................ 1 2 3 4 5

18. Every worker should be expected to join the union where he/she works............. 1 2 3 4 5

19. We need more laws to limit the power of labor unions............................ 1 2 3 4 5

20. Labor unions hold back progress.......... 1 2 3 4 5

1 = Strongly Agree
2 = Agree
3 = Undecided
4 = Disagree
5 = Strongly Disagree

21. The high wage demands of unions reduce chances for employment.................... 1 2 3 4 5

22. The growth of unions has made our democracy stronger....................... 1 2 3 4 5

23. The selfishness of employers can be fought only by strong unions............. 1 2 3 4 5

24. Workers should not have to join a union in order to hold a job................... 1 2 3 4 5

25. Labor unions should be regulated to a greater extent by the federal government..................................... 1 2 3 4 5

26. Every labor union should be required to take out a license from the U.S. government..................................... 1 2 3 4 5

27. In a factory where there is a union, workers who are not members should be required to pay the regular union fees if they are getting union rates of pay... 1 2 3 4 5

28. Most unions gain their membership by forcing workers to join by threats of violence................................. 1 2 3 4 5

29. If the majority of workers in a plant vote to have a union, the others should be required to join...................... 1 2 3 4 5

INFLUENCE OVER WORK-RELATED OUTCOMES

The purpose of this section is for you to describe how much influence you currently have over each of the work-related factors listed below. From the response choices below, choose the one you feel will best indicate the amount of influence you personally have over each statement. Please answer each question . . . do not omit any.

Please circle the appropriate response choice for each statement below:

1 = Very Strongly Agree
2 = Strongly Agree
3 = Agree
4 = Neither Agree nor Disagree
5 = Disagree
6 = Strongly Disagree
7 = Very Strongly Disagree

I currently have a lot of influence on:

30. Academic freedom.................. 1 2 3 4 5 6 7

31. Faculty merit pay increases........ 1 2 3 4 5 6 7

32. The representation of faculty interests in the state legislature.............................. 1 2 3 4 5 6 7

33. Opportunities to be creative....... 1 2 3 4 5 6 7

I currently have a lot of influence on:

34. Faculty support systems (such as clerical support and travel funds)............................ 1 2 3 4 5 6 7

35. Layoff decisions.................. 1 2 3 4 5 6 7

36. Evaluation of teaching............ 1 2 3 4 5 6 7

37. Number of new class preparations... 1 2 3 4 5 6 7

38. Class size........................ 1 2 3 4 5 6 7

39. Faculty fringe benefits........... 1 2 3 4 5 6 7

40. Curriculum decisions.............. 1 2 3 4 5 6 7

41. Faculty sabbatical leave.......... 1 2 3 4 5 6 7

42. Opportunities to do different tasks............................ 1 2 3 4 5 6 7

1 = Very Strongly Agree
2 = Strongly Agree
3 = Agree
4 = Neither Agree nor Disagree
5 = Disagree
6 = Strongly Disagree
7 = Very Strongly Disagree

I currently have a lot of influence on:

43. The representation of ___________ faculty interests within the Board of Regents........................ 1 2 3 4 5 6 7

44. Tenure decisions.................. 1 2 3 4 5 6 7

45. Arbitrary administrative actions... 1 2 3 4 5 6 7

46. Commitment to the profession....... 1 2 3 4 5 6 7

47. Access to detailed ________ budget information........................ 1 2 3 4 5 6 7

48. Relations between faculty and the administration..................... 1 2 3 4 5 6 7

49. Opportunities for professional achievement........................ 1 2 3 4 5 6 7

50. Support of outside professional activities......................... 1 2 3 4 5 6 7

51. Number of classes.................. 1 2 3 4 5 6 7

52. Promotion decisions................ 1 2 3 4 5 6 7

53. The handling of faculty grievances......................... 1 2 3 4 5 6 7

54. Opportunities to interact with faculty professionals at other institutions....................... 1 2 3 4 5 6 7

55. Required nonteaching responsibilities (e.g., committees)........... 1 2 3 4 5 6 7

56. Faculty academic base salary level............................. 1 2 3 4 5 6 7

57. Opportunities to make independent decisions.......................... 1 2 3 4 5 6 7

58. Job security....................... 1 2 3 4 5 6 7

1 = Very Strongly Agree
2 = Strongly Agree
3 = Agree
4 = Neither Agree nor Disagree
5 = Disagree
6 = Strongly Disagree
7 = Very Strongly Disagree

I currently have a lot of influence on:

59. Faculty participation in _______ decision-making processes.......... 1 2 3 4 5 6 7

60. Peer regulation and control by other faculty professionals........ 1 2 3 4 5 6 7

61. Faculty teaching loads............. 1 2 3 4 5 6 7

62. Autonomy in determining approaches, methods, content, etc. of the faculty role...................... 1 2 3 4 5 6 7

63. Hiring decisions................... 1 2 3 4 5 6 7

64. Service to students and other "clients" in the community......... 1 2 3 4 5 6 7

65. Development and maintenance of professional knowledge and skills.. 1 2 3 4 5 6 7

POTENTIAL EFFECTS OF UFF-NEA

The purpose of this section is to give you a chance to tell what effect you feel UFF-NEA will have if elected to be your collective bargaining agent. From the response choices below, choose the one you feel will best indicate the effect you feel UFF-NEA will have on each statement. Please answer each question . . . do not omit any.

Please circle the appropriate response choice for each statement below:

1 = Strongly Help Process
2 = Help Process
3 = Somewhat Helpful to Process
4 = Have No Effect on Process
5 = Somewhat Harmful to Process
6 = Harm Process
7 = Strongly Harm Process

The UFF-NEA will have the following effect on each of these processes:

1. Academic freedom.................. 1 2 3 4 5 6 7

2. Faculty merit pay increases........ 1 2 3 4 5 6 7

3. The representation of faculty interests in the state legislature............................. 1 2 3 4 5 6 7

4. Opportunities to be creative....... 1 2 3 4 5 6 7

5. Faculty support systems (such as clerical support and travel funds)........................... 1 2 3 4 5 6 7

6. Layoff decisions.................. 1 2 3 4 5 6 7

7. Evaluation of teaching............ 1 2 3 4 5 6 7

8. Number of new class preparations... 1 2 3 4 5 6 7

9. Class size........................ 1 2 3 4 5 6 7

10. Faculty fringe benefits........... 1 2 3 4 5 6 7

11. Curriculum decisions.............. 1 2 3 4 5 6 7

12. Faculty sabbatical leave.......... 1 2 3 4 5 6 7

13. Opportunities to do different tasks............................ 1 2 3 4 5 6 7

1 = Strongly Help Process
2 = Help Process
3 = Somewhat Helpful to Process
4 = Have No Effect on Process
5 = Somewhat Harmful to Process
6 = Harm Process
7 = Strongly Harm Process

The UFF-NEA will have the following effect on each of these processes:

14. The representation of ____________ faculty interests within the Board of Regents......................... 1 2 3 4 5 6 7

15. Tenure decisions.................. 1 2 3 4 5 6 7

16. Arbitrary administrative actions... 1 2 3 4 5 6 7

17. Commitment to the profession....... 1 2 3 4 5 6 7

18. Access to detailed ________ budget information........................ 1 2 3 4 5 6 7

19. Relations between faculty and the administration..................... 1 2 3 4 5 6 7

20. Opportunities for professional achievement........................ 1 2 3 4 5 6 7

21. Support of outside professional activities......................... 1 2 3 4 5 6 7

22. Number of classes................. 1 2 3 4 5 6 7

23. Promotion decisions................ 1 2 3 4 5 6 7

24. The handling of faculty grievances......................... 1 2 3 4 5 6 7

25. Opportunities to interact with faculty professionals at other institutions....................... 1 2 3 4 5 6 7

26. Required nonteaching responsibilities (e.g., committees)........... 1 2 3 4 5 6 7

27. Faculty academic base salary level............................. 1 2 3 4 5 6 7

28. Opportunities to make independent decisions.......................... 1 2 3 4 5 6 7

1 = Strongly Help Process
2 = Help Process
3 = Somewhat Helpful to Process
4 = Have No Effect on Process
5 = Somewhat Harmful to Process
6 = Harm Process
7 = Strongly Harm Process

The UFF-NEA will have the following effect on each of these processes:

29. Job security...................... 1 2 3 4 5 6 7

30. Faculty participation in ________ decision-making processes.......... 1 2 3 4 5 6 7

31. Peer regulation and control by other faculty professionals........ 1 2 3 4 5 6 7

32. Faculty teaching loads............. 1 2 3 4 5 6 7

33. Autonomy in determining approaches, methods, content, etc. of the faculty role...................... 1 2 3 4 5 6 7

34. Hiring decisions.................. 1 2 3 4 5 6 7

35. Service to students and other "clients" in the community......... 1 2 3 4 5 6 7

36. Development and maintenance of professional knowledge and skills.. 1 2 3 4 5 6 7

IMPORTANCE OF UFF-NEA EFFECTS

The purpose of this section is for you to rate how important each potential effect of UFF-NEA representation is to you personally. From the response choices below, choose the one you feel will best indicate the importance of each statement to you personally. Please answer each question . . . do not omit any.

Please circle the appropriate response choice for each statement below:

1 = Very Unimportant
2 = Unimportant
3 = Somewhat Unimportant
4 = As Unimportant as Important
5 = Somewhat Important
6 = Important
7 = Very Important

The importance of each of the following is to me:

1. Academic freedom.................. 1 2 3 4 5 6 7
2. Faculty merit pay increases........ 1 2 3 4 5 6 7
3. The representation of faculty interests in the state legislature............................. 1 2 3 4 5 6 7
4. Opportunities to be creative....... 1 2 3 4 5 6 7
5. Faculty support systems (such as clerical support and travel funds)............................ 1 2 3 4 5 6 7
6. Layoff decisions................... 1 2 3 4 5 6 7
7. Evaluation of teaching............. 1 2 3 4 5 6 7
8. Number of new class preparations... 1 2 3 4 5 6 7
9. Class size......................... 1 2 3 4 5 6 7
10. Faculty fringe benefits............ 1 2 3 4 5 6 7
11. Curriculum decisions............... 1 2 3 4 5 6 7
12. Faculty sabbatical leave........... 1 2 3 4 5 6 7
13. Opportunities to do different tasks............................ 1 2 3 4 5 6 7

1 = Very Unimportant
2 = Unimportant
3 = Somewhat Unimportant
4 = As Unimportant as Important
5 = Somewhat Important
6 = Important
7 = Very Important

The importance of each of the following is to me:

14. The representation of ____________ faculty interests within the Board of Regents.......................... 1 2 3 4 5 6 7

15. Tenure decisions................... 1 2 3 4 5 6 7

16. Arbitrary administrative actions... 1 2 3 4 5 6 7

17. Commitment to the profession....... 1 2 3 4 5 6 7

18. Access to detailed ________ budget information....................... 1 2 3 4 5 6 7

19. Relations between faculty and the administration..................... 1 2 3 4 5 6 7

20. Opportunities for professional achievement........................ 1 2 3 4 5 6 7

21. Support of outside professional activities......................... 1 2 3 4 5 6 7

22. Number of classes.................. 1 2 3 4 5 6 7

23. Promotion decisions................ 1 2 3 4 5 6 7

24. The handling of faculty grievances......................... 1 2 3 4 5 6 7

25. Opportunities to interact with faculty professionals at other institutions....................... 1 2 3 4 5 6 7

26. Required nonteaching responsibilities (e.g., committees)........... 1 2 3 4 5 6 7

27. Faculty academic base salary level.............................. 1 2 3 4 5 6 7

28. Opportunities to make independent decisions.......................... 1 2 3 4 5 6 7

1 = Very Unimportant
2 = Unimportant
3 = Somewhat Unimportant
4 = As Unimportant as Important
5 = Somewhat Important
6 = Important
7 = Very Important

The importance of each of the following is to me:

29. Job security........................ 1 2 3 4 5 6 7

30. Faculty participation in ________ decision-making processes.......... 1 2 3 4 5 6 7

31. Peer regulation and control by other faculty professionals........ 1 2 3 4 5 6 7

32. Faculty teaching loads............. 1 2 3 4 5 6 7

33. Autonomy in determining approaches, methods, content, etc. of the faculty role....................... 1 2 3 4 5 6 7

34. Hiring decisions................... 1 2 3 4 5 6 7

35. Service to students and other "clients" in the community......... 1 2 3 4 5 6 7

36. Development and maintenance of professional knowledge and skills.. 1 2 3 4 5 6 7

VOTING INTENTION

The purpose of this section is to give you a chance to tell what your voting intention is in the upcoming union representation election. Please check the response that most closely indicates your intent. Please answer each question . . . do not omit any.

37. I intend to vote in the following manner in the upcoming __________ union representation election.

___1. Vote for the union

___2. I am not eligible to vote in the election

___3. I have not decided how I am going to vote

___4. I am not going to vote in the election

___5. Vote against the union

38-39. Assuming that I were to be represented by a union, the union I would prefer MOST is: (check one)

___01. NEA
___02. AFT
___03. AAUP
___04. Teamsters
___05. UFF-NEA
___06. UFF-AFT
___07. UFF-AAUP
___08. UFF-Teamsters
___09. AFT-NEA Coalition
___10. AFT-AAUP Coalition
___11. NEA-AAUP Coalition
___12. UFF-AFT-NEA Coalition
___13. UFF-AFT-AAUP Coalition
___14. UFF-NEA-AAUP Coalition

40-41. Assuming that I were to be represented by a union, the union I would prefer LEAST is: (check one)

___01. NEA
___02. AFT
___03. AAUP
___04. Teamsters
___05. UFF-NEA
___06. UFF-AFT
___07. UFF-AAUP
___08. UFF-Teamsters
___09. AFT-NEA Coalition
___10. AFT-AAUP Coalition
___11. NEA-AAUP Coalition
___12. UFF-AFT-NEA Coalition
___13. UFF-AFT-AAUP Coalition
___14. UFF-NEA-AAUP Coalition

42. In one or two sentences please state the primary factor(s) affecting whether you will vote in the upcoming union representation election.

43. In one or two sentences please state the primary factor(s) affecting how you will vote in the upcoming union representation election.

******* IMPORTANT *******

This completes the questionnaire. Please look over each question to make sure that you have not omitted any. After you have thoroughly checked to make sure that you did not miss any questions, please make sure that you have included a random letter and the last four digits of your telephone number, or a random letter and four random numbers in the box in the upper right hand corner of the front page of this questionnaire. Please also make sure that you recorded the letter and number you used on the two white stickers provided with this survey . . . these will be used at a later date.

Once you have thoroughly checked the questionnaire, please put the questionnaire in the white, pre-addressed and pre-stamped envelope provided, and mail it to the person indicated on the envelope. If you wish to make additional comments on __________, the questionnaire, or some aspect of your job and the upcoming union representation election that was not covered, please use the space below.

We wish to thank you for your participation in the study and wish you every success in achieving your career objectives.

APPENDIX D

ACTUAL VOTING BEHAVIOR SURVEY OF COMMUNITY COLLEGE FACULTY

April 13, 198__

Dear __________ Community College Faculty Member:

Attached you will find the second part of the survey that we are conducting on the representation election at __________. As we indicated in our cover letter to the first survey questionnaire, we would like you to complete this now that the election has taken place.

The attached survey is extremely short (two-pages) and it should take you only a minute or two to complete. Yet, it is an essential part of our study, since we need to be able to relate pre-vote attitude to your actual voting behavior.

Enclosed with the first survey was a set of stickers on which you were asked to write a letter and some four digit number (either the last four digits of your telephone number or a set of random numbers). To enable us to match this questionnaire with the first survey, we ask you to now attach one of these stickers to this page in the box below. If you have lost your sticker, but remember the letter and number (or just the number) that you used, please write this in the box below.

Again, as with the first survey, we should note that your answers will remain completely confidential, that no individual can be identified, and that only the aggregated responses of all survey respondents will be used for statistical purposes and in the preparation of the study's findings.

Once you have completed the attached survey, please put it in the pre-addressed and pre-stamped envelope.

We expect to have the results of both surveys analyzed shortly, and will make these available to faculty who are interested in seeing them.

Again, we would like to thank you for your support of this important study, and we wish you continued success.

Sincerely,

MATCHING CODE

Kathleen J. Powers
Research Director

____

ACTUAL VOTING BEHAVIOR

Below are questions which will be helpful in relating attitudes to actual voting behavior. Please answer them all . . . do not omit any.

1. How did you vote in the representation election of April 13th? (check one).

   ___1. For the union

   ___2. Against the union

   ___3. I was eligible but did not vote

   ___4. I was not eligible to vote

   ___5. I can't remember how I voted

2. In the first survey that you completed, how did you indicate that you intended to vote? (check one).

   ___1. For the union

   ___2. Against the union

   ___3. I indicated that I was ineligible to vote

   ___4. Undecided as to for or against the union

   ___5. I indicated that I would not vote in the election

   ___6. I can't remember what I indicated in the first survey

3. At the time of the first survey, how strong was your voting intention? (check one).

   ___0. I strongly intended to vote for the union

   ___1. I intended to vote for the union

   ___2. I was largely undecided but leaned toward voting for the union

   ___3. I was completely undecided

   ___4. I was largely undecided but leaned toward voting against the union

   ___5. I intended to vote against the union

___6. I strongly intended to vote against the union

___7. I did not intend to vote (whether eligible or not)

___8. I can't remember

4. Do you regret how you voted in the representation election (or regret that you did not vote)? (check one)

___1. Very strongly regret

___2. Strongly regret

___3. Regret somewhat

___4. Regret slightly

___5. Do not regret at all

ADDITIONAL REACTIONS

Below is an open-ended question that should help generate additional insight into the union representation process. This question is optional, but your answer would be of great value to this study.

5. If you voted differently from how you intended to vote (see questions 1 and 2 above), what caused you to do so?

PLEASE CHECK TO MAKE SURE THAT YOU HAVE ANSWERED QUESTIONS 1-4 ABOVE.

Thank you for your participation in this study. It is greatly appreciated.

APPENDIX E

ATTITUDE SURVEY OF UNIVERSITY FACULTY

ATTITUDE SURVEY

OF

UNIVERSITY FACULTY

KATHLEEN J. POWERS

THE UNIVERSITY OF FLORIDA

May 21, 198___

Dear University ______________ Faculty Member:

Most people have opinions about their jobs, the organizations in which they work, and unions. Yet, little is known about these opinions among academics. As a part of a research project being conducted for the completion of a doctoral degree, I would like to know how _you_ feel about these things at ___________________.

To do this, there are a number of questions here which ask for your _personal_ opinions about job related matters. These questions were not designed to be tricky or difficult. There are _no_ right or wrong answers and they are _not_ a test . . . they will _not_ be used to evaluate you. Your answers are for research purposes _only_ and they will be kept strictly confidential. It should be emphasized that this study was _not_ suggested, endorsed, or funded by any employee, employee group, union, or employer group. It was undertaken strictly because of the researcher's interests. No one at _________ (except the researcher) will ever see your answers. This questionnaire was designed so that individuals cannot be identified; for this reason, please do _not_ put your name on it.

The information provided by your answers will be analyzed by the researcher and if requested will be presented in summary form to any ________ faculty member; this is to ensure that _no individual can be identified_. Some biographical items (age, years on the job, etc.) are asked of you, but this is only so that some comparisons can be made. Once again, please do not put your name on this questionnaire.

Once you have completed the questionnaire (which should take about 5 minutes), please put it in the white pre-addressed envelope provided, seal it, and place it in the mail.

In advance I would like to thank you for participating in the study.

Sincerely,

Kathleen J. Powers
Doctoral Candidate

BACKGROUND INFORMATION

Below are some questions concerning personal and job characteristics and feelings which will provide background information for the study. Please answer each question . . . do not omit any.

1. Sex (check one): ____1. Male ____2. Female

2. Race (check one): ____1. White ____2. Black
____3. Hispanic ____4. American Indian
____5. Oriental ____6. Other

3. Marital Status (check one): ____1. Married
____2. Separated ____3. Divorced
____4. Widowed ____5. Single, never married

4. Number of dependents (check one): ____0 ____1 ____2
____3 ____4 ____5 ____6 ____7
____8 or more

5. What is your age in years? (check one):
___0. less than 25 ___1. 25 to 30
___2. 31 to 35 ___3. 36 to 40
___4. 41 to 45 ___5. 46 to 50
___6. 51 to 55 ___7. 56 to 60
___8. 60 or more

For questions #6 through #8 below, please use the following response choices:

1. Less than 6 months
2. 6 months to less than 1 year
3. 1 year to less than 5 years
4. 5 years to less than 7 years
5. 7 years to less than 10 years
6. 10 years to less than 15 years
7. 15 years to less than 20 years
8. 20 years and more

6. How long have you been employed by University _______________ ? ______

7. Now long have you been working in your present occupational field? ______

8. How long have you been teaching? ______

9. Are you a full-time faculty member? ___1. Yes ___2. No

10. Are you a tenured faculty member? ___1. Yes ___2. No

11. What is the highest level of education you have completed? (check one)

___0. Bachelor's Degree (B.A., B.S., etc.)

___1. Graduate education, no degree

___2. Graduate Degree (M.S., M.A., J.D., etc.)

___3. More than a Master's Degree

___4. Doctoral Degree (Ph.D., Ed.D., etc.)

___5. More than a Doctoral degree

12-13. What area is your last degree in? (check one)

___01. Accounting

___02. Agriculture

___03. Architecture

___04. Business Administration

___05. Building Construction

___06. Dentistry

___07. Education

___08. Engineering

___09. Fine Arts

___10. Forest Resources & Conservation

___11. Health Related Professions

___12. Journalism & Communication

___13. Law

___14. Liberal Arts & Sciences

___15. Medicine

___16. Nursing

___17. Pharmacy

___18. Physical Education, Health & Recreation

___19. Other, please specify______________________

14-15. What is your main instructional program area? (check one)

___01. Accounting

___02. Agriculture

___03. Architecture

___04. Business Administration

___05. Building Construction

___06. Dentistry

___07. Education

___08. Engineering

___09. Fine Arts

___10. Forest Resources & Conservation

___11. Health Related Professions

___12. Journalism & Communication

___13. Law

___14. Liberal Arts & Sciences

___15. Medicine

___16. Nursing

___17. Pharmacy

___18. Physical Education, Health & Recreation

___19. Other, please specify____________________

16. What is your current yearly academic salary? (check one)

___0. less than 20,000

___1. 20,000 to 23,999

___2. 24,000 to 27,999

___3. 28,000 to 31,999

___4. 32,000 to 35,999

___5. 36,000 to 39,999

___6. 40,000 to 43,999

___7. 44,000 to 47,999

___8. 48,000 or more

17-21. In which of the following unions are you currently a member? (Check all that apply; do not check #19 below if you are an association member for non-bargaining purposes)

___17. UFF-NEA

___18. Teamsters

___19. Other "academic" union (e.g., NEA, AAUP, AFT, etc.)

___20. Other union

___21. I am currently not a member of any union

22-24. Which of the following unions were you once (but no longer) a member of? (Check all that apply; do not check #22 if you were an association member for non-bargaining purposes).

___22. Some "academic" union (e.g., NEA, AAUP, AFT, UFF, etc.)

___23. Teamsters ___24. Other Union

25. Are any of your family members now, or have they ever been, a union member? ___1. Yes ___2. No

26-31. If you answered YES to question #25 above, which family members now belong, or belonged in the past, to a union? (check all that apply)

___26. Father ___29. Brother(s)

___27. Mother ___30. Spouse

___28. Sister(s) ___31. Children

32-34. If you answered YES to question #25 above, which of the following unions did your family member(s) belong to? (check all that apply)

___32. Some "academic" union (e.g., NEA, AAUP, AFT, UFF, etc.)

___33. Teamsters ___34. Other Union

For questions #35 through #38 below, please use the following response choices:

1. Completely Distrust
2. Distrust
3. Distrust Somewhat
4. Trust as much as Distrust
5. Trust Somewhat
6. Trust
7. Completely Trust

---

35. To what extend do you trust the Board of Regents? _____

36. To what extent do you trust the ____________ administration? _____

37. To what extent do you trust your college's administration? _____

38. To what extent do you trust your department's administration? _____

POTENTIAL EFFECTS OF A UNION'S REPRESENTATION

The purpose of this section is to give you a chance to tell what effects you feel a union typically has as a collective bargaining agent. From the response choices below, choose the one you feel will best indicate the effects a union typically has on each statement. Please answer each question . . . do not omit any.

Please circle the appropriate response choice for each statement below:

1 = Strongly Help Process
2 = Help Process
3 = Somewhat Helpful to Process
4 = Have No Effect on Process
5 = Somewhat Harmful to Process
6 = Harm Process
7 = Strongly Harm Process

A union typically has the following effect on each of these processes:

1. Academic freedom.................. 1 2 3 4 5 6 7

2. Faculty merit pay increases........ 1 2 3 4 5 6 7

3. The representation of faculty interests in the state legislature.............................. 1 2 3 4 5 6 7

4. Opportunities to be creative....... 1 2 3 4 5 6 7

5. Faculty support systems (such as clerical support and travel funds)............................ 1 2 3 4 5 6 7

6. Layoff decisions.................. 1 2 3 4 5 6 7

7. Evaluation of teaching............ 1 2 3 4 5 6 7

8. Number of new class preparations... 1 2 3 4 5 6 7

9. Class size........................ 1 2 3 4 5 6 7

10. Faculty fringe benefits........... 1 2 3 4 5 6 7

1 = Strongly Help Process
2 = Help Process
3 = Somewhat Helpful to Process
4 = Have No Effect on Process
5 = Somewhat Harmful to Process
6 = Harm Process
7 = Strongly Harm Process

A union typically has the following effect on each of these processes:

11. Curriculum decisions............... 1 2 3 4 5 6 7

12. Faculty sabbatical leave........... 1 2 3 4 5 6 7

13. Opportunities to do different tasks............................. 1 2 3 4 5 6 7

14. The representation of ____________ faculty interests within the Board of Regents......................... 1 2 3 4 5 6 7

15. Tenure decisions................... 1 2 3 4 5 6 7

16. Arbitrary administrative actions... 1 2 3 4 5 6 7

17. Commitment to the profession....... 1 2 3 4 5 6 7

18. Access to detailed ________ budget information........................ 1 2 3 4 5 6 7

19. Relations between faculty and the administration..................... 1 2 3 4 5 6 7

20. Opportunities for professional achievement........................ 1 2 3 4 5 6 7

21. Support of outside professional activities......................... 1 2 3 4 5 6 7

22. Number of classes.................. 1 2 3 4 5 6 7

23. Promotion decisions................ 1 2 3 4 5 6 7

24. The handling of faculty grievances......................... 1 2 3 4 5 6 7

25. Opportunities to interact with faculty professionals at other institutions....................... 1 2 3 4 5 6 7

1 = Strongly Help Process
2 = Help Process
3 = Somewhat Helpful to Process
4 = Have No Effect on Process
5 = Somewhat Harmful to Process
6 = Harm Process
7 = Strongly Harm Process

A union typically has the following effect on each of these processes:

26. Required nonteaching responsibilities (e.g., committees)........... 1 2 3 4 5 6 7

27. Faculty academic base salary level............................. 1 2 3 4 5 6 7

28. Opportunities to make independent decisions......................... 1 2 3 4 5 6 7

29. Job security...................... 1 2 3 4 5 6 7

30. Faculty participation in ________ decision-making processes.......... 1 2 3 4 5 6 7

31. Peer regulation and control by other faculty professionals........ 1 2 3 4 5 6 7

32. Faculty teaching loads............ 1 2 3 4 5 6 7

33. Autonomy in determining approaches, methods, content, etc. of the faculty role...................... 1 2 3 4 5 6 7

34. Hiring decisions.................. 1 2 3 4 5 6 7

35. Service to students and other "clients" in the community......... 1 2 3 4 5 6 7

36. Development and maintenance of professional knowledge and skills.. 1 2 3 4 5 6 7

IMPORTANCE OF UNION EFFECTS

The purpose of this section is for you to rate how important each potential effect of union representation is to you personally. From the response choices below, choose the one you feel will best indicate the importance of each statement to you personally. Please answer each question . . . do not omit any.

Please circle the appropriate response choice for each statement below:

1 = Very Unimportant
2 = Unimportant
3 = Somewhat Unimportant
4 = As Unimportant as Important
5 = Somewhat Important
6 = Important
7 = Very Important

The importance of each of the following is to me:

1. Academic freedom.................... 1 2 3 4 5 6 7
2. Faculty merit pay increases........ 1 2 3 4 5 6 7
3. The representation of faculty interests in the state legislature............................. 1 2 3 4 5 6 7
4. Opportunities to be creative....... 1 2 3 4 5 6 7
5. Faculty support systems (such as clerical support and travel funds)............................. 1 2 3 4 5 6 7
6. Layoff decisions................... 1 2 3 4 5 6 7
7. Evaluation of teaching............. 1 2 3 4 5 6 7
8. Number of new class preparations... 1 2 3 4 5 6 7
9. Class size......................... 1 2 3 4 5 6 7
10. Faculty fringe benefits............ 1 2 3 4 5 6 7
11. Curriculum decisions............... 1 2 3 4 5 6 7
12. Faculty sabbatical leave........... 1 2 3 4 5 6 7
13. Opportunities to do different tasks............................. 1 2 3 4 5 6 7

1 = Very Unimportant
2 = Unimportant
3 = Somewhat Unimportant
4 = As Unimportant as Important
5 = Somewhat Important
6 = Important
7 = Very Important

The importance of each of the following is to me:

14. The representation of ____________ faculty interests within the Board of Regents........................ 1 2 3 4 5 6 7

15. Tenure decisions.................. 1 2 3 4 5 6 7

16. Arbitrary administrative actions... 1 2 3 4 5 6 7

17. Commitment to the profession....... 1 2 3 4 5 6 7

18. Access to detailed ________ budget information....................... 1 2 3 4 5 6 7

19. Relations between faculty and the administration.................... 1 2 3 4 5 6 7

20. Opportunities for professional achievement....................... 1 2 3 4 5 6 7

21. Support of outside professional activities........................ 1 2 3 4 5 6 7

22. Number of classes.................. 1 2 3 4 5 6 7

23. Promotion decisions................ 1 2 3 4 5 6 7

24. The handling of faculty grievances........................ 1 2 3 4 5 6 7

25. Opportunities to interact with faculty professionals at other institutions...................... 1 2 3 4 5 6 7

26. Required nonteaching responsibilities (e.g., committees)........... 1 2 3 4 5 6 7

27. Faculty academic base salary level............................. 1 2 3 4 5 6 7

28. Opportunities to make independent decisions......................... 1 2 3 4 5 6 7

29. Job security....................... 1 2 3 4 5 6 7

1 = Very Unimportant
2 = Unimportant
3 = Somewhat Unimportant
4 = As Unimportant as Important
5 = Somewhat Important
6 = Important
7 = Very Important

The importance of each of the following is to me:

30. Faculty participation in ________ decision-making processes.......... 1 2 3 4 5 6 7

31. Peer regulation and control by other faculty professionals........ 1 2 3 4 5 6 7

32. Faculty teaching loads............. 1 2 3 4 5 6 7

33. Autonomy in determining approaches, methods, content, etc. of the faculty role....................... 1 2 3 4 5 6 7

34. Hiring decisions................... 1 2 3 4 5 6 7

35. Service to students and other "clients" in the community......... 1 2 3 4 5 6 7

36. Development and maintenance of professional knowledge and skills.. 1 2 3 4 5 6 7

******* IMPORTANT *******

This completes the questionnaire. Please look over each question to make sure that you have not omitted any. After you have thoroughly checked to make sure that you did not miss any questions, please put the questionnaire in the white, pre-addressed envelope provided, and place it in the mail. If you wish to make any comments about the questionnaire, or some aspect of your job that was not covered, please use the space below.

We wish to thank you for your participation in the study and wish you every success in achieving your career objectives.

APPENDIX F

INTERCORRELATION MATRIX

INTERCORRELATION MATRIX
(N=86)

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1. Sex	-																							
2. Race	-06	-																						
3. Marital Status	21*	10	-																					
4. Number of Dependents	26*	04	39*	-																				
5. Age	03	06	-12	-20	-																			
6. Years in Occupation	-07	09	-06	-08	39*	-																		
7. Tenure	01	11	07	16	07	02	-																	
8. Educational Level	14	14	-32*	-02	-00	-16	06	-																
9. Annual Pay	23*	04	-11	-07	34*	37*	28*	01	-															
10. Signing Authorizstion Card	-07	17	-13	01	-07	00	23*	26*	07	-														
11. Arts Teaching Ares	13	-00	-06	-00	22*	08	14	42*	10	12	-													
12. Sciences Teaching Ares	15	06	-13	-02	-10	-01	13	15	08	03	-22*	-												
13. Professions Tesching Area	-14	04	07	-01	01	01	-19	-43*	-09	-28*	-60*	-28*	-											
14. Trust in the Administration	-07	-19	24*	11	10	-06	-19	-38*	00	-63*	-25*	-20	40*	-										
15. Organizational Commitment	07	-07	12	01	05	08	-03	-37*	11	-55*	-32*	-01	29*	69*	-									
16. Job-related Stress	-08	12	-02	-01	-12	03	01	05	01	46*	02	-06	-21*	-55*	-51*	-								
17. General Job Sstisfaction	-06	-15	02	-12	02	-09	-22*	-32*	-02	-65*	-24*	-12	31*	77*	76*	-61*	-							
18. Economic Job Satisfaction	04	-20	06	-10	05	-08	-08	-29*	06	-67*	-17	-07	26*	71*	74*	-59*	92*	-						
19. Noneconomic Job Satisfaction	-13	-09	-02	-12	-01	-10	-31*	-31*	-08	-56*	-27*	-15	33*	73*	69*	-56*	95*	76*	-					
20. Mobility	-03	-06	04	-03	-10	-13	-14	18	-11	22*	01	-01	-08	-27*	48*	12	-29*	-34*	-21*	-				
21. Attitude Toward Unions	10	11	-05	12	-08	-16	08	33*	-09	70*	20	05	-23*	-54*	-58*	34*	-67*	-64*	-62*	18	-			
22. Union Instrumentality	08	05	-06	12	-05	-14	09	37*	-04	65*	21*	03	-31*	-56*	-62*	37*	-64*	-60*	-59*	15	79*	-		
23. Voting Intention	04	16	-13	04	-04	-03	19	34*	14	81*	21*	08	-27*	-61*	-60*	48*	-71*	-67*	-66*	09	78*	81*	-	
24. Actual Voting Behavior	02	16	-17	-04	-06	-12	17	35*	03	79*	23*	02	-25*	-63*	-60*	49*	-74*	-69*	-70*	12	79*	81*	97*	-

Note. All decimals omitted.

* p ≤ .05.

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BIOGRAPHICAL SKETCH

Kathleen Jay Powers was born on August 1, 1946, in Jersey City, New Jersey. Over the past thirty years, Ms. Powers has resided in numerous locations, including Puerto Rico and St. Thomas, United States Virgin Islands. Upon graduating from San Jorge Preparatory School, in Santurce, Puerto Rico, Ms. Powers returned to the continential United States where she held various positions in private industry.

In 1974, Ms. Powers received the Bachelor of Business Administration degree with a specialization in marketing and psychology from Florida International University. In 1975, Ms. Powers received the Master of Business Administration degree with a specialization in industrial relations, also from Florida International University. After mothering her second daughter and working as an instructor in the Department of Business at Miami Dade Community College, South Campus, she entered the management doctoral program in the College of Business Administration at the University of Florida. Her primary areas of interest are industrial relations and personnel and human resource management.

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I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

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This dissertation was submitted to the Graduate Faculty of the Department of Management and Administrative Sciences in the College of Business Administration and to the Graduate School and was accepted as partial fulfillment of the requirements for the degree of Doctor of Philosophy.

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